

FLIGHT

The
AIRCRAFT ENGINEER
AND AIRSHIPS

First Aeronautical Weekly in the World. Founded January, 1909

Founder and Editor: STANLEY SPOONER

A Journal devoted to the Interests, Practice and Progress of Aerial Locomotion and Transport

OFFICIAL ORGAN OF THE ROYAL AERO CLUB OF THE UNITED KINGDOM

No. 1120. (Vol. XXII. No. 24.)

JUNE 13, 1930

Weekly, Price 6d.
Post free, 7½d. Abroad, 8d.

Editorial Offices: 36, GREAT QUEEN STREET, KINGSWAY, W.C.2.
Telephone: Editorial, Holborn 1884. Advertising, Holborn 3211
Telegrams: Truditur, Westcent, London.

Annual Subscription Rates, Post Free.

United Kingdom .. 30s. 4d. Abroad .. 33s. 0d.*

* Foreign subscriptions must be remitted in British currency. (See last Editorial Page.)

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EDITORIAL COMMENT



HIS year's race for the Challenge Cup presented by His Majesty the King promises to make history. Not only is the number of entries very much greater than in previous years, but for the first time in the history of British aviation machines have been entered for the race by two Royal Princes: the Prince of Wales and Prince George, the former being represented by a Hawker "Tomtit" and the latter by a De Havilland "Hawk Moth."

King's Cup Race

The fact that two of His Majesty's sons should have decided further to demonstrate the very keen interest which they take in aviation is cause for satisfaction throughout the British aviation world, and cannot fail to give a very welcome stimulus to the movement of private flying. And should the fates be kind to the Princes and one of their entries win the race, the whole nation would feel extremely pleased.

In addition to the machines entered by two of the King's sons, the entries list, published on page 627 of this week's issue, discloses entries by quite a few prominent people who have not previously been represented in the King's Cup Air Race. Thus, we find Lord Trenchard represented by a Blackburn "Bluebird," Lord Wavertree by a "Gipsy Moth," Lord Douglas-Hamilton by another "Bluebird," to be flown by himself, and Lord Rothermere by the new Desoutter Mark II monoplane. All these entries are encouraging signs of increased interest in aviation, and will be welcomed on all sides.

Concerning the race itself, certain alterations have been made in the regulations this year. Whether or not these changes are in all cases to the good remains to be seen. The alteration in the regulations which demands that all aircraft must, in order to be eligible, have been originally designed as a civil aircraft has doubtless ruled out a certain number of types which would otherwise have been seen in the race, but on the other hand, the fact that the entries list this year has reached a high-water mark of 96 indicates that there is nowadays no difficulty in attracting sufficient civil

DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list—

1930	
June 8-15 ..	F.A.I. Conference, Paris.
June 14 ..	Close of Royal Tournament, Olympia.
June 14 ..	Manston Garden Party.
June 14 ..	Shelley Cup for Models, Wimbledon Common.
June 15 ..	Ashwell-Cooke Cup, Lympe.
June 19 ..	N.F.S. Air Meeting, Nottingham.
June 20 ..	Entries close for Circuit of Italy.
June 21 ..	Household Brigade Flying Club Meeting at Heston.
June 21 ..	Air Rallye at Haldon Aerodrome, Teignmouth.
June 26 ..	Ipswich Air Pageant.
June 27 ..	R.A.F. Dinner Club Annual Dinner.
June 28 ..	Royal Air Force Display, Hendon.
June 30 ..	Brighton Air Week.
July 5 ..	King's Cup Race and Hanworth Air Pageant.
July 9-12 ..	R.A.F. Athletic Championships, Uxbridge.
July 17-23 ..	"British Week" at Antwerp Exhibition.
July 19 ..	N.F.S. Flying Meeting, Leeds.
July 19 ..	N.F.S. Flying Meeting, Hull.
July 19 ..	Air Pageant at Hanworth, in Aid of National Birthday Trust Fund.
July 20- Aug. 7 ..	International Light Plane Tour of Europe, starting from Berlin.
July 26 ..	Norwich Flying Meeting.
July 31 ..	Entries close for 1931 Schneider Trophy Contest.
Aug. 15-31 ..	Circuit of Italy.
Sept. 1-6 ..	5th International Air Congress at The Hague.
Sept. 6 ..	Opening of Ratcliffe Aerodrome, Leicester.
Sept. 6-28 ..	Aero Exhibition, Stockholm, Sweden.
Sept. 20 ..	Liverpool Air Pageant.
Sept. 27 ..	N.F.S. Air Meeting, Hanworth.
Nov. 28- Dec. 14 ..	Paris Aero Show.
1932 May 31 ..	Closing date for Cillon Cross-Channel Glide £1,000 Prize.

machines. When His Majesty first offered his Challenge Cup, things were rather different. The light aeroplane as we know it to-day was non-existent, or at least untried. To get any serious number of entries it was necessary to admit service types of aircraft modified or converted for the purpose of the race. This need no longer exists, and we think it will be generally admitted that it is fit and proper that the machines competing for His Majesty's Cup should now be of purely civil type.

The second important alteration in the regulations is that the race will, this year, have to be completed in one day, instead of the two days' race with a stop at night half-way, which has been the rule in previous years. This change has resulted in the total distance of the course having been shortened considerably, although the distance is a good deal greater than each day's distance in previous years. For the machines to cover some 750 miles in a day, very hard flying will be required, and to this extent more will be asked of the machines and engines. The reliability and durability of modern aero engines are, however, much greater than was the case a few years ago, and it is not likely that a very large percentage of the 96 machines will fall by the wayside owing to mechanical trouble.

A secondary effect of the decision to confine the race to one day has been that very slow machines have perforce had to be ruled out, and the Royal Aero Club Racing Committee has had to stipulate that no machine will be handicapped at a speed of less than 80 m.p.h. This automatically precludes participation by a certain number of very low-powered machines (of which not many remain in service), and of perhaps one or two specifically designed for very low landing speed. While this is to be regretted, the regulation is probably, on the whole, a wise one.

Of new machines entered for this year's King's Cup Race there are quite a few. Some of those entered will not, it is to be feared, be able to take part, as the road to the Certificate of Airworthiness and the King's Cup Race lies through Martlesham. But several at least are likely to "get through" in time, and their behaviour will be watched with the greatest interest. Quite unofficial rumours have it that the Segrave "Meteor" has performed well at Martlesham, and should rumour for once speak truth, this machine will be uncommonly interesting as representing a type not hitherto developed in this country.



In last week's issue of FLIGHT a summary was given of an interesting debate in the House of Lords on commercial air transport. Lord Trenchard, who once signed a minority report disapproving of subsidies to civil air lines, made the interesting suggestion that the money necessary for air transport should not be regarded as a subsidy but a payment for unforeseen benefits. Lord Thomson agreed with him in principle, and said that he did not like subsidies. If he were not convinced, though he could give no reasons for his conviction, that air transport would in time pay its way, he would be more definitely in favour of State air lines. As he did believe in the commercial prospects of air transport, he seemed to regret the existence of a State airway in India.

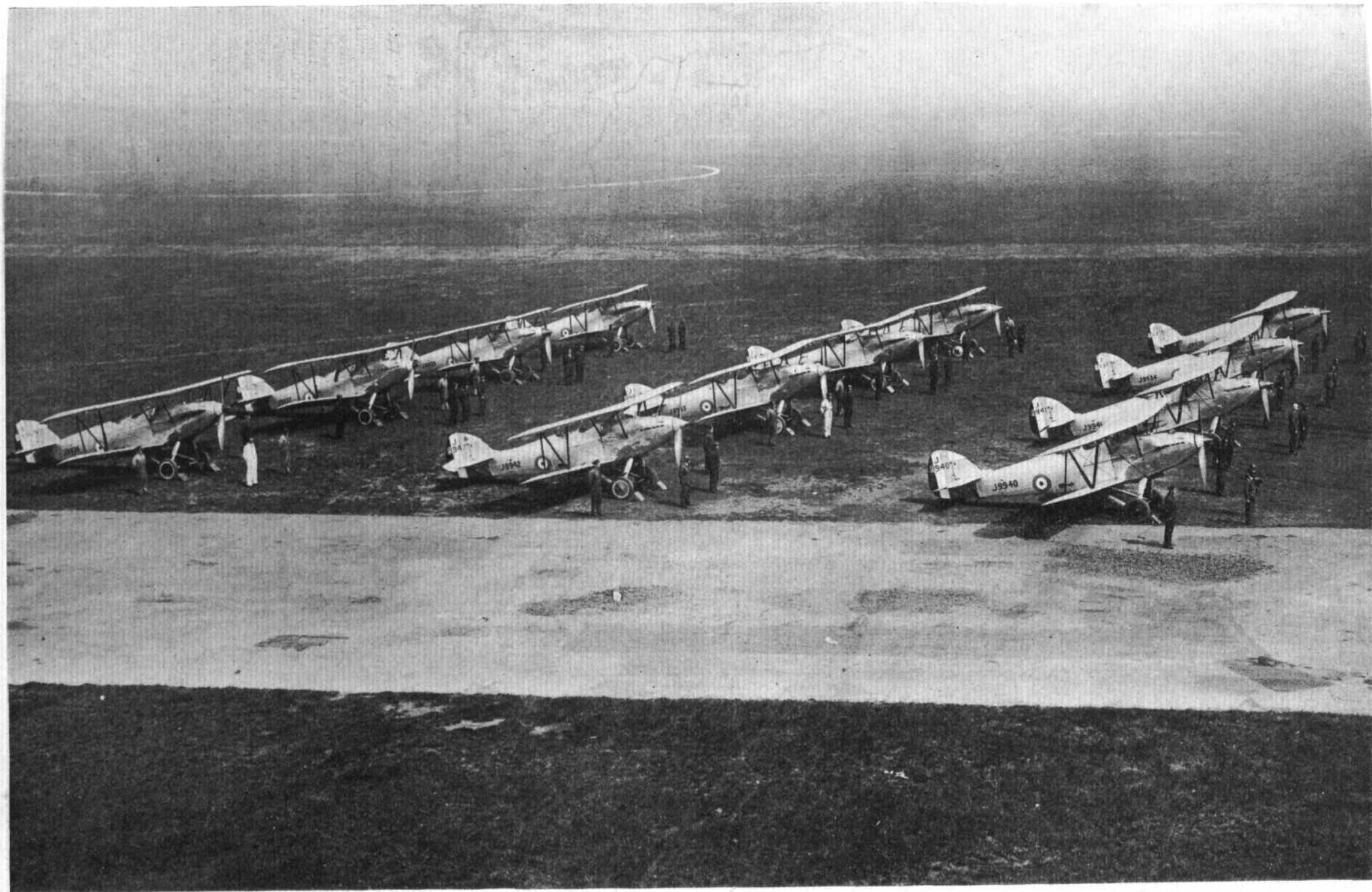
FLIGHT is not concerned with politics other than those of the air. So long as air transport goes ahead

and gives the best possible service to humanity in general, and the British Empire in particular, we have no abstract prejudices about capitalistic or socialistic methods. It is the result, not the means, which interests us. Imperial Airways, West Australian Airways, Qantas, Western Canada Airways, etc., are capitalistic concerns. The one airway in India is an example of socialism. It appears that if the Indian Government had not come forward and started its own airway, there would not yet be any airway in India. Therefore, we say, all honour to the Indian Government! So long as the capitalistic companies give good service, as they do, we wish them all the best of good fortune and in due time large dividends without subsidies.

Lord Trenchard finds himself in agreement with Sir Alan Cobham. These two eminent authorities insist that communications—in this case air communications—are more important than dividends. Where the interests of the Empire are at stake, the axiom is undeniably true. The classic example is military railways. No one expects them to pay a dividend, but as the community would not be safe without them the State must pay for them. Sir Alan Cobham's pet instance is a railway in Malaya which never pays its way, but opens up the country which it serves. We believe we are right in saying that the Australian Government never expected West Australian Airways to pay when the first contract was granted to it. The fact that it now earns a very respectable revenue is of less importance than the services which the airway renders to the otherwise almost isolated settlers of the north-west.

The time is approaching when each Government will have to classify airways under two headings: (a) those which may be expected to pay their way, though they may require temporary help; and (b) those which may never pay but are essential to the welfare of the Empire. For the latter the State must be prepared to find the money. There is at present no common Empire purse, and the proportion of the cost of inter-Dominion airways which will be borne by each Government must be a matter for arrangement. At present negotiations are taking place between Great Britain and Australia about the financing of the India-Australia airway. Arrangements have been happily concluded between Great Britain, the Union, and the East African colonies for the Cape to Cairo airway. These two great trunk routes will, we hope, in time pay their way, as well as do notable service to the Empire.

There is another part of the Empire where air communications are very badly needed, irrespective of the prospect of immediate dividends, though we hope that there too dividends will ultimately materialise. We allude to the colonies in the West Atlantic. British Honduras is sometimes called the most isolated of British colonies. We ought to see if an air link with the West Indies, branching off to British Guiana to the south and to the Bermudas and ultimately to Canada in the north, cannot break up that isolation. It seems to us that, whether or no there is a prospect of immediate dividends, such an air system ought to be started. We are glad to learn from Lord Thomson that the Air Ministry is beginning to see light in that direction, and is meeting with a sympathetic response from the Canadian Government. There is no more deserving case, and we look to our socialistic Cabinet to push on with this project.



No. 33 (Bomber) Squadron at Eastchurch aerodrome. This unique photograph shows the squadron drawn up by flights with its full establishment of 12 machines. The type of aeroplane is the Hawker "Hart" with Rolls-Royce "F" type engine, and this is the first squadron to be equipped with this type. "B" Flight is in front, "C" Flight in the centre, and "A" Flight in the rear. The officer in white overalls in front of the nearest "Hart" of "A" Flight is Sqdn.-Ldr. J. J. Breen. (FLIGHT Photo.)

THE KING'S CUP AIR RACE

Record Entry for this Year's Contest

THE observers at the various controls and turning points in this year's King's Cup Air Race—which starts and finishes at Hanworth, on July 5—will have a very busy time of it if all the competing machines take part. As will be seen from the official entry list (which closed on June 6), on the next page, all previous King's Cup records for number of machines entered have easily been beaten with an entry of 96.

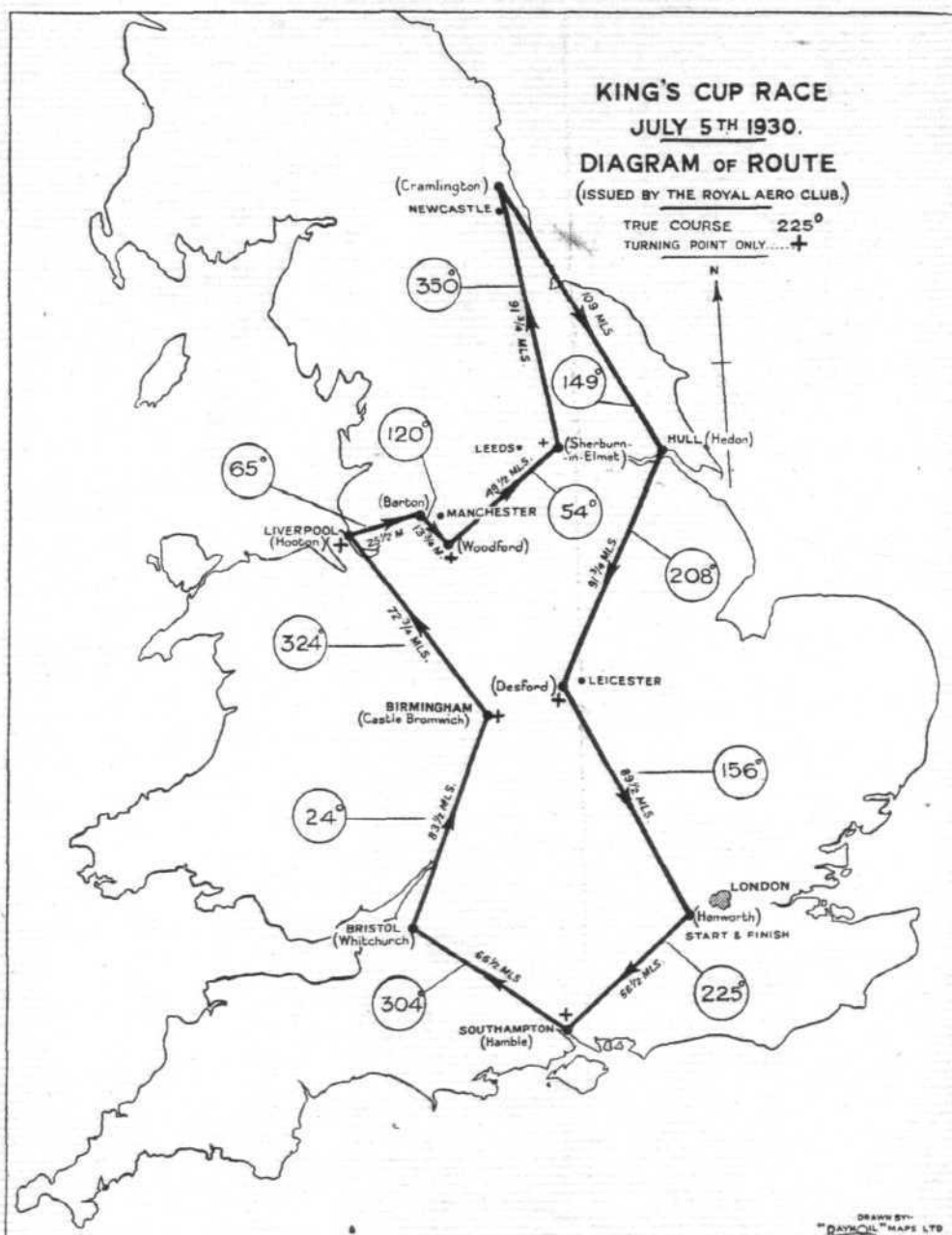
It is not merely in numbers, however, that this year's entry is noteworthy, for there are one or two other features that go to make it one of more than usual interest. Perhaps the outstanding feature is the fact that two Royal machines will compete—one entered by the Prince of Wales and the other by Prince George.

The Prince of Wales has entered a Hawker "Tomtit," fitted with an Armstrong-Siddeley "Mongoose" engine, and this machine will be piloted by Sqdn.-Ldr. D. S. Don, who will have with him Flight-Lieut. H. W. Heslop as second pilot and navigator. Prince George has entered a de Havilland "Hawk Moth," fitted with an Armstrong-Siddeley "Lynx" engine, the pilot being Mr. E. H. Fielden—the Prince of Wales' personal pilot.

Other notable entrants include Lord Trenchard, Lord Wakefield of Hythe, Lord Rothermere, Sir Philip Sassoon, Sir Robert McLean and Capt. F. E. Guest. It is interesting to note that the latter will have as his rival Miss D. C. Guest, his daughter, while Capt. de Havilland, who is also flying in the race, will have his son, Mr. G. de Havilland, Jun., as his rival. Another "family affair" will be found in Mr. and Mrs. A. S. Butler, who are both flying D.H.'s.

The race itself is a handicap one, confined to British civilian machines only. Particulars have already been published in FLIGHT, but it may be mentioned here that the course is 749½ miles, starting from Hanworth, thence to Hamble, Bristol, Birmingham, Hooton Park, Manchester, Woodford, Sherburn, Cramlington, Hull, Leicester, and back to Hanworth. We give on this page a sketch map of the course, prepared by Rayn Oil Maps, Ltd., to which we have added the true course settings for each section.

As regards the machines, while there are several new types (some "dark horses"), the majority comprise the hardy annuals that have figured in previous King's Cup races. As usual, the "Moth" family top the list, accounting for 46 all told out of the 96. Of these, 36 are standard "Moths" of various marks, nine are the new "Puss Moth," and one, Prince George's "Hawk Moth." Blackburn "Bluebirds" come next with a total of 14, and then eight Avro "Avians." There are seven "Spartans," including three of the new "Arrows," and three Westland "Widgeons." Only one



Sketch map of the King's Cup course.

high-powered machine figures in the list—the Vickers "Vulture" (500 h.p. Bristol "Jupiter").

Of the new types, the most interesting, perhaps, will be the "Meteor," designed by Sir Henry Segrave, fitted with two "Gipsy III" engines and piloted by Flight-Lieut. Atcherley, last year's King's Cup winner. The first trials of this machine have been very promising. Two dark horses are the Avro "Avian" monoplanes, while two Comper "Swifts," three Desoutter Limousines, two Hawker "Tomtits," a "Martlet" and a "Robin," although not unknown to our readers, are newcomers to this race. A Robinson "Redwing" (illustrated on p. 628), an "Arrow Active" and a Hendy 302 conclude the "new types."

Finally, there are six pilots from the fair sex:—Lady Bailey, Miss Winifred Brown, Mrs. A. S. Butler, Miss D. C. Guest, Miss Winifred Spooner, and Mrs. C. M. Young. Miss Spooner, it will be seen, will be flying, this time, the "Martlet."

men available at each of the control aerodromes, namely: Hanworth, Bristol, Manchester, Newcastle and Hull. These mechanics will be wearing white overalls with the Cirrus badge on the pocket.

Cirrus Aero-Engines, Ltd., are anxious that all entrants in the King's Cup Air Race requiring any assistance shall avail themselves of the services of these mechanics.

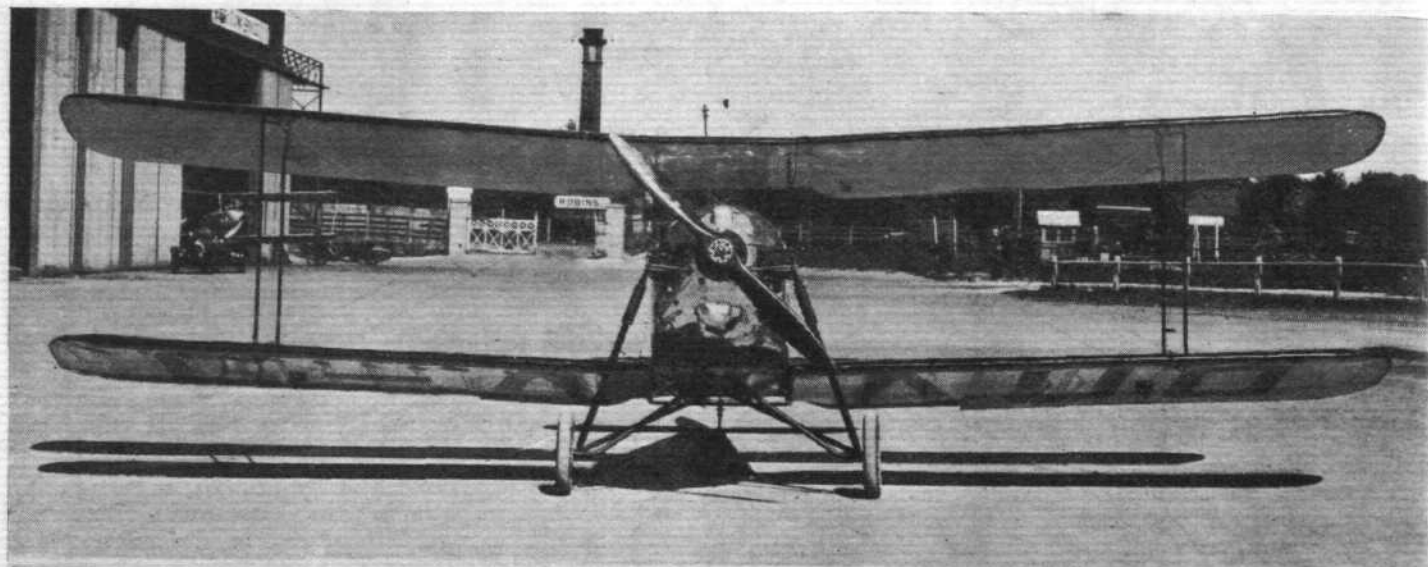
King's Cup Air Race

CIRRUS AERO-ENGINES, LTD., announce that they will be very pleased to tune, free of charge, all engines of their manufacture entered in the above air race, provided that the aircraft can be brought to their Works at Croydon Aerodrome at least two weeks before the day of the race.

The Cirrus Company will have mechanics and service

COMPETITORS IN THE KING'S CUP AIR RACE, JULY 5, 1930

No. and Ident. Mark	Entrant	Pilot	Machine	Engine
1 (G-AARU)	F. S. Symondson	F. S. Symondson	D.H. Moth	Gipsy.
2 (G-EBYV)	I. R. Parker	I. R. Parker	D.H. Moth	Cirrus II.
3 (G-EBVZ)	A. G. G. Marshall	A. G. G. Marshall	D.H. Moth	Gipsy I.
4 (G-AAZF)	Gerard Fane	Gerard Fane	Comper Swift	Pobjoy, Type "P."
5 (G-EBWU)	Lieut. Caspar John, R.N.	Lieut. Caspar John, R.N.	Avro Avian	Cirrus II.
6 (G-AAWU)	Arthur Stanley Preist	Arthur Stanley Preist	D.H. Moth	Gipsy I.
7 (G-AAEW)	Derek Schreiber	Derek Schreiber	D.H. Moth	Gipsy.
8 (G-EBQW)	James Brian Buckley	James Brian Buckley	D.H. Moth	Cirrus III.
9 (G-AAZW)	Roy Faulkner	Capt. C. D. Barnard	D.H. Puss Moth	Gipsy III.
10 (G-AAXP)	Andrew P. Holt	Flt.-Lieut. R. L. R. Atcherley	Segrave-Meteor	Gipsy III (2).
11 (G-AAVD)	W. L. Hope	W. L. Hope	D.H. Puss Moth	Gipsy III.
12 (G-AAGA)	Lieut.-Col. A. Hamilton Gault	Lieut.-Col. A. Hamilton Gault	D.H. Moth	Gipsy I.
13 (G-AABO)	T. H. Naylor	T. H. Naylor	D.H. Moth	Gipsy I.
14 (G-AAWZ)	W. A. Andrews	W. A. Andrews	"Spartan Arrow"	Gipsy I.
15 (G-EBVD)	A. G. Vlasto	George Vlasto	D.H. Moth	Cirrus I.
16 (G-EBOT)	D. M. K. Marendaz		D.H. Moth	Cirrus I.
17 (G-AAGN)	John C. Ballardie	Lieut.-Col. L. A. Strange	Spartan	Cirrus III
18 (G-AADE)	C. S. Napier	C. S. Napier	Westland Widgeon	Gipsy I.
19 (G-ABBE)	Capt. H. H. Balfour, M.C., M.P.	Capt. H. H. Balfour	"Spartan Arrow"	Gipsy II.
20 (G-AAFA)	M. H. Findlay	M. H. Findlay	D.H. Puss Moth	Gipsy III.
21 (G-AACC)	Capt. Norman Blackburn	T. Rose	Blackburn Bluebird Mark IV	Cirrus Hermes.
22 (G-AABV)	Capt. Norman Blackburn	Capt. Norman Blackburn	Blackburn Bluebird Mark IV	Gipsy
23 (G-AAEE)	Hon. Lady M. Bailey, D.B.E.	Hon. Lady M. Bailey	D.H. Moth	Gipsy I.
24 (G-AAGO)	A. E. Chambers	H. T. Andrews	Spartan	Gipsy II.
25 (G-ABAJ)	Sqdn.-Ldr. H. W. Woollett	F./O. H. R. L. Hood	Spartan 3-seater	Cirrus Hermes
26 (G-ABBH)	Lord Wakefield of Hythe	Captain H. S. Broad	D.H. Puss Moth	Gipsy III.
27 (G-AATO)	Norman E. Holden	Flt.-Lieut. G. G. H. Du Boulay	Blackburn Bluebird Mark IV	Gipsy I.
28 (G-AAVG)	Marshal of the Royal Air Force, Lord Hugh Trenchard, G.C.B., D.S.O., D.C.L., LL.D.	Sqdn.-Ldr. L. H. Slatter	Blackburn Bluebird Mark IV	Cirrus Hermes
29 (G-AAIR)	Col. The Master of Sempill, A.F.C.	Col. The Master of Sempill	Blackburn Bluebird Mark IV	Gipsy I.
30 (G-AAOI)	Rt. Hon. Sir Philip Sassoon, Bart., P.C., G.B.E., C.M.G., M.P.	John W. Gillan	Blackburn Bluebird Mark IV	Cirrus Hermes.
31 (G-AAUV)	Loel Guinness	Loel Guinness	Blackburn Bluebird Mark IV	Gipsy I.
32 (G-AATN)	Robert McAlpine	Flt.-Lieut. H. R. D. Waghorn	Blackburn Bluebird Mark IV	Gipsy I.
33 (G-AALL)	H.R.H. The Prince of Wales, K.G.	Sqdn.-Ldr. D. S. Don	Hawker Tomtit	Mongoose IIIA.
34 (G-ABAM)	Richard R. W. R. Trafford	Richard R. W. R. Trafford	D.H. Moth	Gipsy I.
35 (G-EBWT)	W. L. Runciman	W. L. Runciman	D.H. Moth	Cirrus III.
36 (G-AARX)	Flt.-Lieut. N. Comper	L. S. Snaith	Comper Swift	Scorpion II.
37 (G-EBRQ)	J. Wellworth	J. Wellworth	Westland Widgeon III	Genet III.
38 (G-EBQH)	F. A. I. Muntz		D.H. Moth	Gipsy I.
39 (G-AAEF)	A. B. Ferguson	A. B. Ferguson	D.H. Moth	Gipsy I.
40 (G-AAAG)	Flt.-Lieut. F. G. Gibbons	Flt.-Lieut. F. G. Gibbons	Spartan	Cirrus Hermes.
41 (G-AAHJ)	Capt. F. W. Ewart Morgan	S. A. Thorn	Avro Avian Mark IVm	Cirrus Hermes
42 (G-AATK)	A. M. Desoutter	A. B. H. Youell	Desoutter I	Cirrus Hermes.
43 (G-AASW)	Sir Robert McLean	F./O. J. Summers	Vickers Vellore	Bristol Jupiter XI (2).
44 (G-AAHP)	W. L. Hope	R. O. I. Muntz	D.H. Moth	Gipsy II.
45 (G-AAXT)	Norman E. Holden	E. G. Hordern	D.H. Puss Moth	Gipsy III.
46 (G-AAZY)	J. W. P. Chalmers	J. W. P. Chalmers	D.H. Moth	Gipsy II.
47 (G-AAUW)	Mrs. Robert Blackburn	Flt.-Lieut. H. V. Rowley	Blackburn Bluebird Mark IV	Gipsy I.
48 (G-AAWY)	Flt.-Lieut. J. R. Addams	Flt.-Lieut. J. R. Addams	"Spartan Arrow"	Cirrus Hermes.
49 (G-ABAE)	Mrs. C. M. Young	Mrs. C. M. Young	D.H. Moth	Gipsy I.
50 (G-AAUO)	Capt. P. G. Robinson		Robinson "Redwing"	A.B.C. Hornet.
51 (G-AAWR)	C. M. Pickthorn	C. M. Pickthorn	D.H. Moth	Gipsy I.
52 (G-AAKI)	Richard Ince	Richard Ince	D.H. Moth	Gipsy I.
53 (G-ABBA)	Lord Wavertree	Flt.-Lieut. S. B. Allen	D.H. Moth	Gipsy I.
54 (G-EBOI)	P. A. Wills	P. A. Wills	D.H. Moth	Cirrus II.
55 (G-EBVZ)	Miss Winifred S. Brown	Miss Winifred S. Brown	Avro Avian	Cirrus III.
56 (G-AALK)	Capt. The Hon. F. E. Guest	Capt. The Hon. F. E. Guest	D.H. Moth	Gipsy I.
57 (G-ABAX)	Capt. The Hon. F. E. Guest	Capt. The Hon. F. E. Guest	Hawker Tomtit	Mongoose IIIA.
58 (G-AADA)	John D. Irving	John D. Irving	D.H. Moth	Gipsy I.
59 (G-EBQN)	P. N. G. Peters	Flt.-Lieut. T. B. Bruce	Avro Avian	Cirrus III.
60 (G-AAEL)	Flt./Lieut. D. V. Carnegie	Flt./Lieut. D. V. Carnegie	D.H. Moth	Gipsy I.
61 (G-AAPY)	Charles Bernard Wilson	P. E. G. Sayer	Desoutter I	Cirrus Hermes.
62	A. C. Thornton	Flt./Lieut. J. S. Chick	Arrow "Active"	Cirrus Hermes.
63 (G-AAVT)	Mrs. D. Lawley-Gibbs	Capt. Edgar W. Percival	Hendy 302	Cirrus Hermes.
64 (G-AATS)	Harold John Andrews	Harold John Andrews	Blackburn Bluebird Mark IV	Gipsy I.
65 (G-AAZY)	Capt. The Hon. F. E. Guest	Miss Winifred Spooner	Martlet	Gipsy II.
66 (G-EBPQ)	Lieut. L. G. Richardson, R.N.	Lieut. L. G. Richardson, R.N.	D.H. Moth	Cirrus III.
67 (G-EBRM)	R. G. Cazalet	R. G. Cazalet	Westland Widgeon III	Cirrus Hermes.
68 (G-AAZI)	Rt. Hon. Lord Rothermere	C. B. Wilson	Desoutter II	Gipsy III.
69 (G-AAYW)	Frank Hough	T. N. Stack	Avro Avian Monoplane	Cirrus Hermes.
70 (G-AAKT)	Roy Chadwick	J. L. N. Bennett Baggs	Avro Trainer	Mongoose IIIA.
71 (G-AAASO)	Rt. Hon. Sir Philip Sassoon, Bt., P.C., G.B.E., C.M.G., M.P.	Flt./Lieut. S. L. G. Pope	Avro V	Genet Major I (3).
72 (G-EBZZ)	Capt. R. S. Rattray	Capt. R. S. Rattray	D.H. Moth	Cirrus II.
73 (G-AAYG)	Sq./Ldr. H. A. Whistler	Sq./Ldr. H. A. Whistler	D.H. Moth	Gipsy II.
74 (G-AAUZ)	H.R.H. The Prince George, K.G.	Flt./Lieut. E. H. Fielden	D.H. Hawk Moth	Armstrong Siddeley Lynx VI.
75 (G-AASL)	G. de Havilland, Jr.	G. de Havilland, Jr.	D.H. Moth	Gipsy II.
76 (G-AAAG)	Mrs. A. S. Butler	Mrs. A. S. Butler	D.H. Moth	Gipsy II.
77 (G-AAXL)	A. S. Butler	A. S. Butler	D.H. Puss Moth	Gipsy III.
78 (G-ABAI)	Capt. R. Douglas	Capt. R. Douglas	D.H. Moth	Gipsy I.
79 (G-AAOX)	Capt. G. de Havilland	Capt. G. de Havilland	D.H. Puss Moth	Gipsy III.
80 (G-AAXZ)	Lieut.-Comm. Glen Kidston, R.N.	Lieut.-Comm. Glen Kidston, R.N.	D.H. Puss Moth	Gipsy III.
81 (G-AALJ)	Albert A. Nathan	Albert A. Nathan	D.H. Moth	Gipsy I.
82 (G-AACV)	Geoffrey Goodwin	Geoffrey Goodwin	Avro Avian	Hermes I.
83 (G-AABS)	R. H. Dobson	D. S. Green	Avro Avian	Genet Major I.
84 (G-AAVU)	J. D. Siddeley	F. Tomkins	Avro Avian Monoplane	Genet Major I.
85 (G-AAJU)	A. J. A. W. Barr	J. C. Cantrill	Avro Avian	Cirrus Hermes.
86 (G-AAZP)	Miss D. C. Guest	Miss D. C. Guest	D.H. Puss Moth	Gipsy III.
87 (G-AAJS)	Capt. I. C. Maxwell	Capt. I. C. Maxwell	D.H. Moth	Gipsy I.
88 (G-AAJO)	G. P. Fairbairn	G. P. Fairbairn	D.H. Moth	Gipsy I.
89 (G-AAUU)	Harald Peake	Sq./Ldr. A. H. Orlebar	Blackburn Bluebird Mark IV	Gipsy I.
90 (G-AASV)	Eric Gandar-Dower	Flt./Lieut. F. J. Fogarty	Blackburn Bluebird Mark IV	Gipsy I.
91 (G-AAWI)	Lady Wakefield	Flt./Lieut. John Oliver	Avro Avian	Cirrus Hermes.
92 (G-AADX)	A. C. M. Jackaman	A. C. M. Jackaman	D.H. Moth	Gipsy I.
93 (G-AAVF)	Wm. E. Rootes	Sq./Ldr. J. W. Woodhouse	Blackburn Bluebird Mark IV	Gipsy II.
94 (G-AAHI)	H. N. S. Norman	H. N. S. Norman	D.H. Moth	Gipsy I.
95 (G-AAID)	H. A. G. Howard	A. G. Mortimer	"Robin"	A.B.C. Scorpion II.
96	Lord M. A. Douglas Hamilton	Lord M. A. Douglas Hamilton	Blackburn Bluebird Mark IV	Cirrus III.



THE ROBINSON "REDWING": Designed by Mr. John Kenworthy and built by the Robinson Aircraft Co., Ltd., this machine is a side-by-side two-seater of wood construction. The engine is an A.B.C. "Hornet" of 75 h.p. (FLIGHT Photos.)

PRIVATE FLYING AND CLUB NEWS



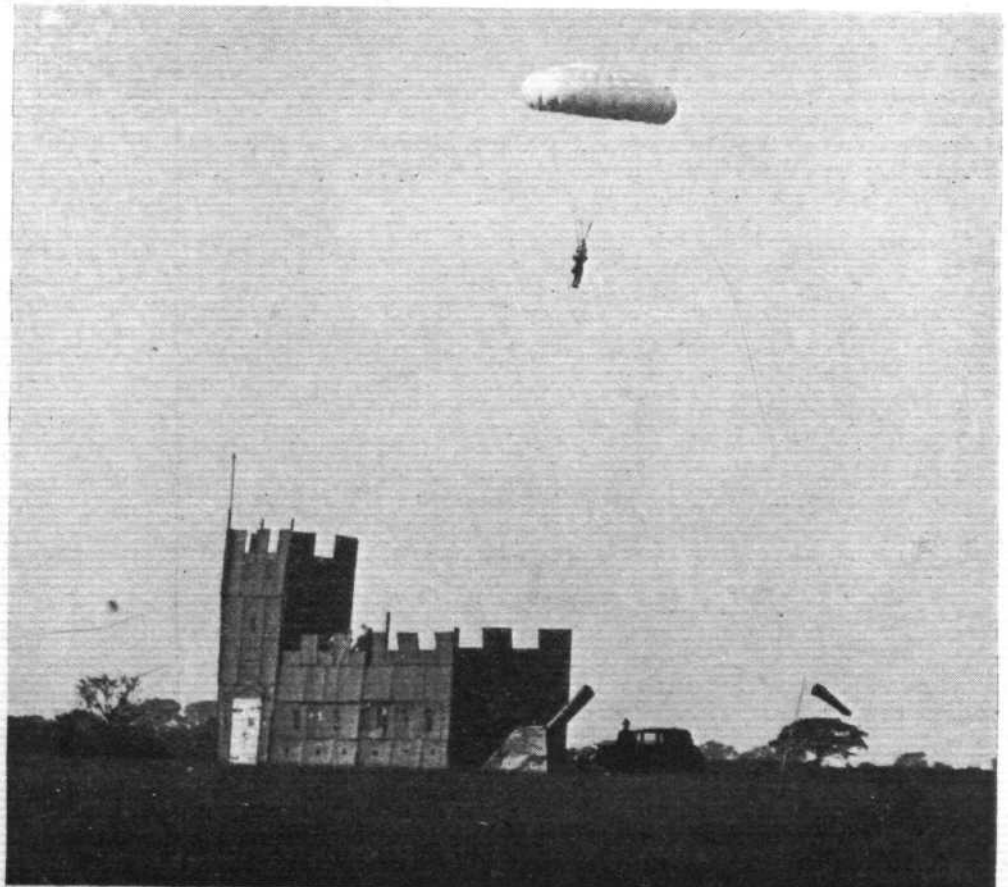
REAL ATTENDANCE: A view of one of the enclosures at Sywell. (FLIGHT Photo.)

THE SYWELL PAGEANT

FOR efficient organisation of the right kind for the job no one could beat the executive of the Northamptonshire Aero Club. At their meeting on Whit Monday there was no hitch, no delays, and no trouble, and everyone felt at home and cheerfully did their best to make things go smoothly. Everything that could have been done to make it an enjoyable meeting was done, and there was a complete absence of that overbearing despotic sort of organisation which, although it is often meant in good part, yet invariably defeats its own ends by engendering a law-breaking spirit in those taking part in the show.

There was, in fact, just the right amount of control exercised to make the meeting perfectly safe and yet enjoyable owing to an apparent—more apparent than real—lack of restrictions. Under the able management of the Linnell Brothers, all flying was carried out safely without hitch, and although the programme had to be changed at times, there were no delays on this account.

It was regrettable that at the last moment the War Office refused permission for the co-operation of the 4th Battalion Northamptonshire Regiment, and the 25th Armoured Car Company, but volunteers nobly stepped into the breach and produced a really funny finale to the Pageant, in spite



SEE IT FROM THE AIR! Mr. Tranum takes a look at the hostile fort on his way down. (FLIGHT Photo.)



Capt. M. Andrews who built up the Spanish Naval Air Service and is now foreign representative for Blackburn's. (FLIGHT Photo.)

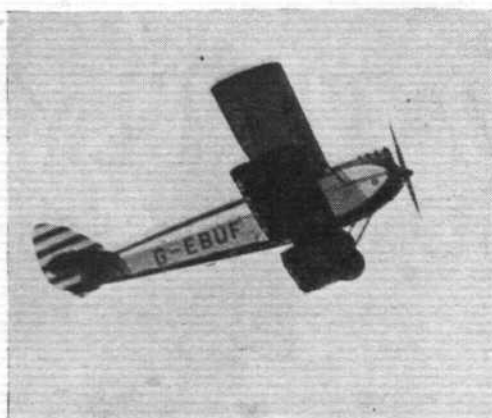
of the fact that the fort refused to burn as it should have done!

With their usual unprecedented hospitality, the Club supplied lunch and tea on the aerodrome for all visiting pilots, and the actual catering arrangements were in the capable hands of G. Bradshaw, of Northampton.

The loudspeaking installation by Mullards is worthy of mention as this type of loudspeaker is undoubtedly the clearest and most efficient for this work that we have heard. Mention was made of this type in FLIGHT after the Hadleigh Meeting last year, and this year it seems to be even better, and is certainly one of the best which could be used in the open.

The meeting was formally declared open by Capt. Barnard, who was present with Mrs. Barnard, and he expressed his appreciation of the efforts of the club through the loudspeakers.

After this there was a parade and



Capt. Stack aerobating with his usual verve. (FLIGHT Photo.)



Capt. Barnard declares the Pageant open. (FLIGHT Photo.)



Flight-Lieut. W. Johnson, whose magnificent inverted flying roused even the oldest pilots to enthusiasm. (FLIGHT Photo.)

fly-past of one of each of the different types of machines which were present at the meeting. These included a Widgeon, Moth, Avian, Klemm, S.E.5a, Desoutter, Bluebird, Junkers Junior, Romeo, Breda. A couple of circuits were flown by the machines after taking off, and they in turn dived over the main public enclosure. This enclosure, by the way, was evidently arranged by those who well understood the mentality of their local crowds for, situated at the back of the field was not only the usual refreshment tent, but also the best part of a full-sized "fair." Parents who wished to watch the flying therefore had no difficulty with their children, and the owners of the "merry-go-rounds," etc., must have done a roaring trade.

Event No. 3 was an exhibition of aerobatics by Flt.-Lieut. W. Johnson of the C.F.S. He used Capt. Broad's Moth, which is specially fitted for inverted flying, and the show he gave



THE NEW MACHINE PARK: After the style of Hendon. A series of types were segregated in a special park to show the variety of aircraft at the meeting. (FLIGHT Photo.)



THE ATTACK. The friendly tribes attack the fort. (FLIGHT Photo.)

us was undoubtedly one of the finest that has ever been seen at any meeting. One of the first things he did which made everyone sit up and take notice was an inverted steep turn with nearly vertical bank, that is, with the pilot on the outside of the turn. His subsequent inverted climbing turns, bunts, and inverted half loops were the most finished manœuvres that we have ever seen.

The Brooklands School of Flying next carried out a little formation flying and stunting in formation. The feature of this event was the fact that the formation was led by Mr. G. Murray, an amateur pilot, who has been taught by the School, and has since done so much in the way of aerobatics. The others in the formation were Capt. Davis, whom, as everyone must know, runs the School, and Mr. G. Lowdell, who has recently joined as an instructor. They were all flying Moths, and they carried out some very pretty flying; even such ambitious stunts as the Prince of Wales' Feathers, or at least a version of it, were carried through beautifully, and this formation must have been practising at Brooklands a great deal to have reached such a state of perfection.

Mr. S. Thorn then took up the Cirrus Engine Co.'s Hermes-Avian, and went through all manner of evolutions with his usual skill.

He was followed by Herr Knötzsch, who is test pilot for the Klemm people at Stuttgart. Herr Knötzsch flew a small white and red Klemm with the 40-h.p. Salmson engine, and proceeded to aerobat it in a manner we have never seen before in this country. In spite of the small size of the engine, the Klemm did not appear to require much dive before going over in a slow but very pretty loop. It seemed somewhat incongruous to watch a machine like this with a span of over 42 ft., and a low wing monoplane at that, doing slow rolls, but she appeared to handle very easily.

"A Rough Reception for Rubbernecks" was the title of the next event, and Flt.-Lieut. Rose and Capt. Stack on their Cirrus III and Hermes Moths, respectively, proceeded to "bomb" a car load of enthusiastic "American Tourists." Those in the car—a somewhat dignified name for the relic of

Mr. Henry Ford's youth—seemed to enjoy the show just as much as the spectators, and even the hero, who was run right over by the vehicle, did not appear to resent it.

After this, Mr. Store showed just how slow the Breda can fly, and even though it is a cabin machine, he aerobated and looped it in a perfect manner.

Capt. Stack then took up his Hermes-Moth, which has been acquired by Smiths' Aircraft Instruments, and threw it about the sky in a manner which shows that he has no doubts about its strength. His flick rolls are about the fastest we have ever seen on a Moth, and no one less able than he would be qualified to do such things.

The "Surprise Item" was a new version of the amateur pilot. An ardent photographer (Mr. G. Lowdell) rushed out and stood up in the cockpit of a Moth to obtain a photograph of a celebrated American Pilot, who looked rather like Fatty Arbuckle!—when he suddenly sat down in the cockpit and off the machine went. His subsequent efforts to land and his gyrations in the air were an excellent imitation of an amateur with the "wind up."

Mr. G. Murray did some aerobatics on his S.E.5a, and after this there was a race between Mr. Tyzack, Mr. Ruutz-Rees and Capt. Davis, in which the first-named won.

Mr. John Trantum, who had already jumped earlier in the day at Reading, arrived at this point in a Bluebird with Mr. Allott, and after climbing to about 2,000 ft. left the machine and delayed his drop for a few hundred feet before opening his chute. He was using the new quick release which the Russell firm have brought out primarily for use at sea, and he says that he found it of great help as he prevented himself being dragged by releasing immediately he touched the ground.

Mr. Murray gave us yet another exhibition when he took up the Pratts Moth and did some inverted flying. This machine, not being fitted so that the engine may run in the inverted position, did not allow him to do a great deal on his back, but his inverted falling leaf was a spectacular manœuvre which is not often seen.

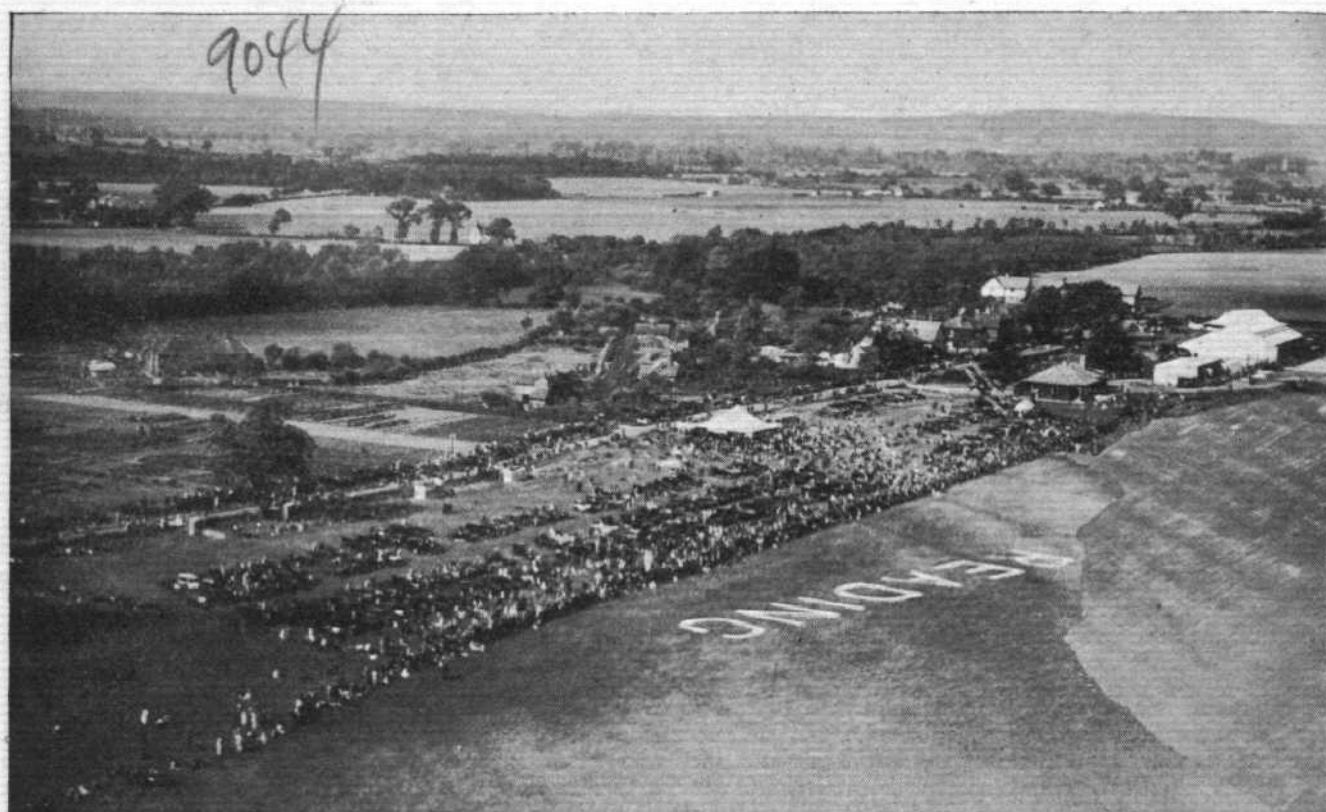
The finale of the show was an attack on a fortress by a band of friendly tribesmen supported by aircraft. The fort put up a spirited resistance, and the defenders nearly captured one of the machines which they "shot" down out of control on the aerodrome, but Mr. Lowdell hurriedly landed and saved his comrade from a sticky death! Toward the end of the attack the bombs from the aircraft gradually set the fort on fire, but failed to ignite it properly, much to the chagrin of the younger members of the audience.

Judging from the size of the crowd the Club should have done very well out of this meeting, and if this is so they thoroughly deserve it, and we wish them the best of luck in their future meetings. May all other executives benefit and not rest satisfied until their own meetings become at least half as popular as Sywell's always are.



ATTABOY! A large American tourist—and others—testing out a Tin-Lizzie. (FLIGHT Photo.)

THE READING AIR FETE



THE READING AIR FETE : Aerial view of the shilling enclosure. Towards the right may be seen the B.B. & O. club house. (FLIGHT Photo.)

A VAST crowd of people attended the Air Fete which had been organised, on Whit Monday, by the Berks, Bucks and Oxon Aero Club at the Woodley aerodrome, Reading. How all the people got to and from Woodley is something of a mystery. Private cars in the enclosure testified to the manner of the coming and going of several hundred visitors, and doubtless the omnibuses carried a good many thousands, but, even so, thousands must have been sufficiently air-minded to walk the $3\frac{1}{2}$ miles or so from the Reading tram terminus to the aerodrome. Which merely proves that the general public is rapidly emerging from the indifference with which it once treated flying. And although the fact that a meeting was being held at Northampton on the same day, and that as a result it was not found possible to carry out the Reading meeting in all its details, it was quite evident that the public was not in the least disappointed. Those of us who make a habit of attending these meetings may feel our interest cooling somewhat, but we should remember that the general public, for whom, after all, these meetings are held, does not get such a surfeit of flying. In trying to judge of the success or otherwise of a meeting one should, in other words, attempt to see it from the point of view of the man in the street. And from that point of view we think Reading was pleased.

Northampton had attracted a large number of private owners, and as a result the number who visited Reading was smaller than it would otherwise have been.

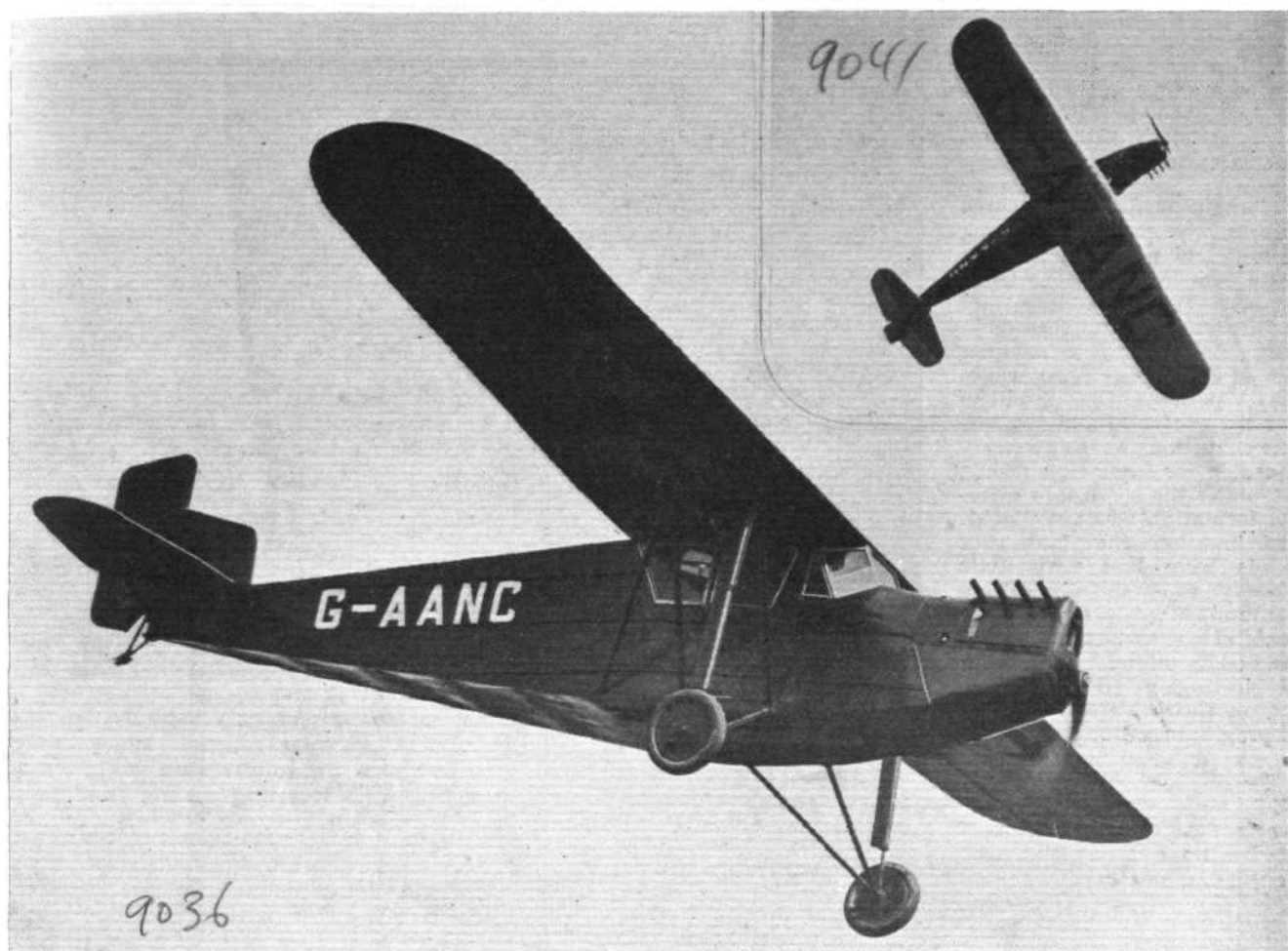
Nevertheless, quite a goodly number arrived, some in time to take part in the arrival competition (won by Col. Strange, who landed his "Spartan" 1 second after "zero hour" (12 o'clock, noon)), others during the afternoon. Among these was Mr. Dudley Watt, whose slow flying on the D.W.2 attracted considerable attention. Of a much more spectacular nature (and at the other end of the speed scale) was the arrival and subsequent evolutions of Captain Blake on the Blackburn "Lincock." This little machine, although only fitted with an Armstrong Siddeley "Lynx" engine, appears to have an amazing performance, and of its phenomenal manoeuvrability Captain Blake did not leave one in any doubt whatever.

Of other outstanding exhibitions during the afternoon mention must be made of the aerobatics performances of Flight-Lieut. Schofield, whose evolutions show a polish and finish which few pilots attain. And it seemed to matter not at all to him whether he was on the Desoutter monoplane or on the Moth.

The first item on the afternoon's programme was a handicap race for private owners from Woodley to Hanworth and back, a distance of some 45 miles. Several of the entries for this race did not turn up, and when the first machine was sent away sharply at 2.30 there were but six machines on the starting line. These, with their pilots and handicap allowances, were: Gipsy Moth G-AAAE, Lady Bailey, 3 min. 25 sec.; Simmonds Spartan G-AAMG,



FIRST AGAIN : Mr. H. Edwards, the well-known Oxford Blue, won the Reading-Hanworth-Reading Race in his Avro Baby. (FLIGHT Photo.)



FINISHED FLYING: Flight-Lieut. Schofield's demonstrations of aerobatic flying are always characterised by a remarkable "finish." He is here seen flying the Desoutter-Hermes monoplane, and, inset, flying upside down. (FLIGHT Photos.)

Col. Strange, 3 min. 26 sec.; Blackburn Bluebird, G-AATO, Mr. E. Hordern, 4 min. 27 sec.; Avro Avian, G-EBXJ, Mr. H. Ashworth, 6 min. 28 sec.; Avro Baby, G-EAUM, Mr. H. Edwards, and Glenny and Henderson Gadfly, G-AAEY, Mr. Tanner, both 9 min. 10 sec. Edwards and Tanner started off together, the tall grass on the aerodrome being "wing high" to the Gadfly, which looked for all the world like a puppy hopping out of the grass to get a look around. Right at the start it became evident that the Gadfly was slower than Hinkler's old Avro Baby, and before the machines were out of sight the Baby had established quite a good lead. However, Mr. Tanner stuck it like a good sportsman, and completed his race in spite of his handicap. That's the right spirit.

The race was won by Edwards on the Avro Baby at a speed of 84 m.p.h. Col. Strange, on the Spartan, got second place with a speed of 99 m.p.h., and Lady Bailey was third on the Gipsy-Moth, her speed being exactly the same as that of Col. Strange.

While the six machines were flying their race Mr. Schofield gave a splendid exhibition of aerobatics on one of the Hermes-engined Desoutter monoplanes belonging to N.F.S. His flick-rolls at a low altitude were particularly good, as was also his exhibition of inverted flight.

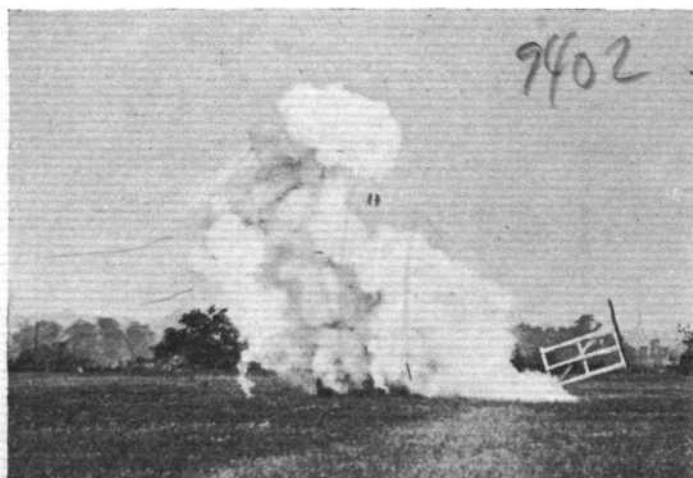
When Schofield had landed Mr. J. B. Wilson, chief instructor at the Berks, Bucks & Oxon Aero Club, gave a demonstration of how not to fly, doing successfully all the *gauche* things which the beginner usually commits

with different results. Schofield followed with another aerobatics display on a Gipsy-Moth belonging to the club, and then Mr. Trnum took his place in a Bluebird piloted by Mr. Alliot. When a height of about 2,000 ft. had been reached Mr. Trnum jumped, and in spite of the strong wind his Russell Lobe parachute brought him safely down in the exact centre of the aerodrome. Gathering the parachute together hurriedly, Mr. Trnum left by air for Northampton, where, as recorded elsewhere, he made another descent.

A parade and fly-past of the assembled types of aircraft was well carried out, Mr. Boyes' explanatory comment on each type being much appreciated by the spectators.

An aerobatics competition for private owners attracted five entries, the judges very rightly giving the award to Mr. Bainbridge, of the B.B. & O. Aero Club, for his terrific "falling leaf" stunt.

The very strong and very hot wind having blown Mr. Bainbridge's falling leaf out of the sky, Captain Blake roared off on his Blackburn Lincock. The speed and general "snappiness" of this machine is quite astounding, and one would imagine that for small nations who cannot afford single-seater fighters of 500 h.p. or so, the Lincock would make an ideal fighter, with an engine of quite low power, such as the "Lynx." Captain Blake's handling of the Lincock was superb, and the fact that the machine is very fast indeed helped to show up his evolutions to best advantage. His upward spins were particularly spectacular, and found great favour with the crowd.

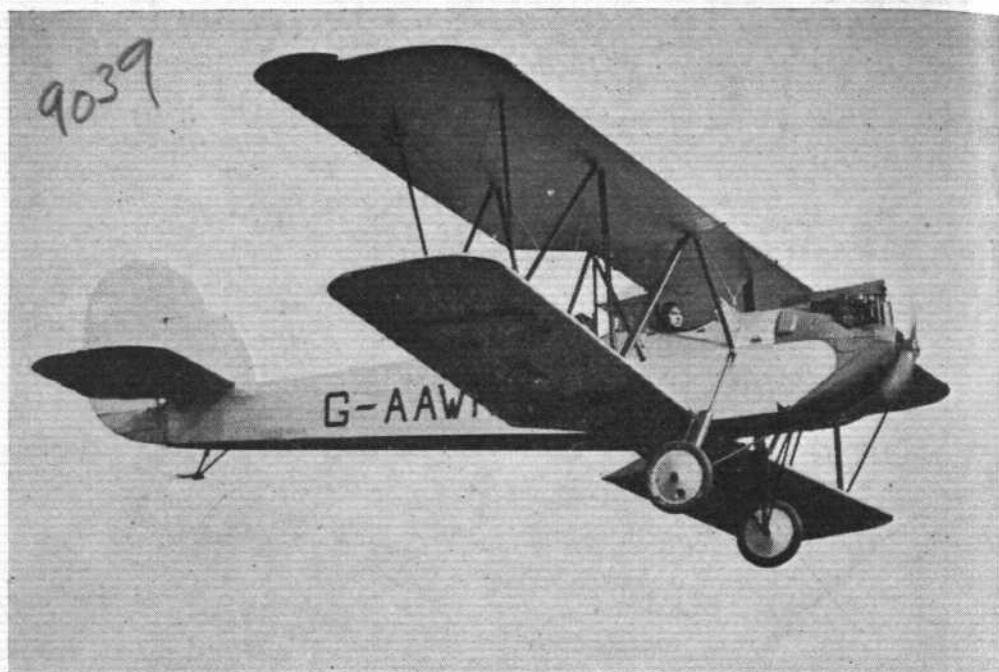


THE FINALE: Blowing up the level crossing at Reading (not on the G.W.R.). (FLIGHT Photo.)

Skating along, a few feet off the ground, "on the side of the fuselage," was another evolution well carried out, the machine being noticeably steady in this unnatural attitude in spite of a very bumpy wind.

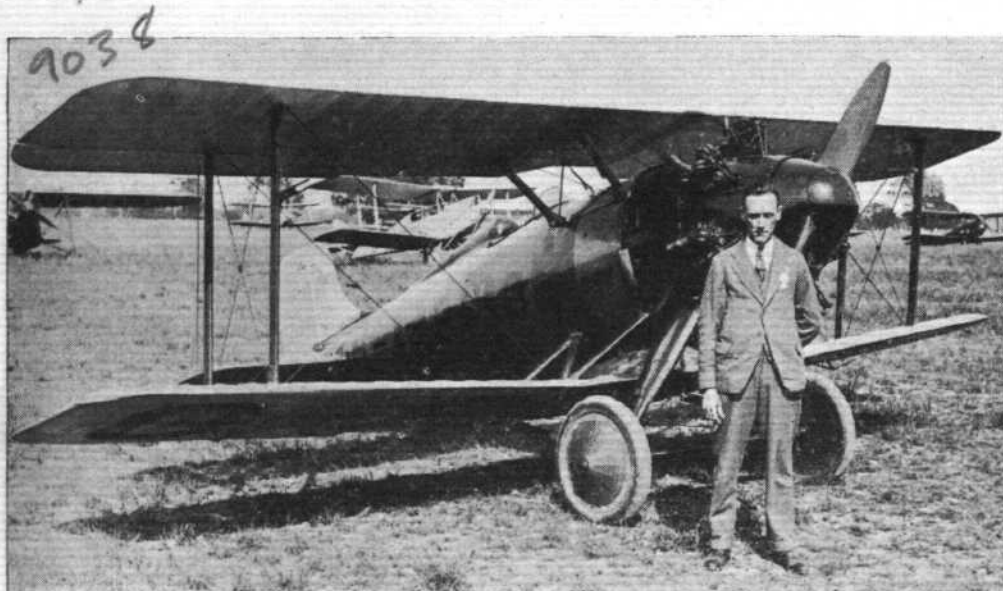
The formation flying on three club Moths was good, considering the terrific bumps which were obviously encountered. The three pilots were Messrs. Wilson and Cubitt, instructors at the club, and Mr. Bainbridge, a member of the B.B. & O. Aero Club. It may, perhaps, be doubtful whether the general public realised that the conditions were extremely unfavourable for formation flying, or that under the conditions existing the formation was very tight. Not to mention the fact that the pilots have had very little opportunity to practise. Taking it all around, it was a thoroughly-good exhibition, and the club can be proud of its pilots.

The blowing up of the level crossing marked the end of the official programme, but joy riding was continued until dusk.



GROUND SPEED 10 m.p.h.: Mr. Dudley Watt giving a demonstration of slow flying at Reading on his D.W.2-Cirrus.

(FLIGHT Photo.)



A DIFFICULT COLOUR SCHEME: The Blackburn Lincock-Lynx is painted in black and lemon stripes, which do not photograph well. Captain Blake's demonstration of aerobatics on this machine was a very wonderful spectacle.

(FLIGHT Photo.)

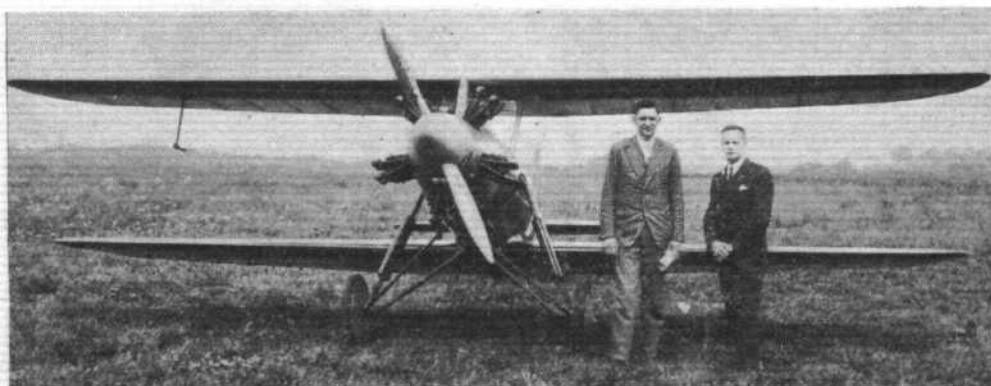
THE BRITISH GLIDING ASSOCIATION. The Flying Demonstrations by Herr Kronfeld will be continued at Itford next week-end, June 14 and 15.

Primary instruction will be given by Herr Kronfeld in the early mornings. Tent accommodation, five tents only, will be available.

It is hoped that affiliated Clubs will be able to take

advantage of this opportunity for instruction by Herr Kronfeld.

SUPER STREAMLINING! The Darmstadt D. 18, shown below, built by the Akademische Flieger Gruppe at Darmstadt to the designs of Herr Fetcher has a Genet Major engine and has broken quite a considerable number of records. It is credited with a top speed of over 130 m.p.h.



A Genet-engined Darmstadt D18.



A MODERN CLUB HOUSE: Bristol Aerodrome Committee have seen to it that their aerodrome has a well-equipped club-house, which is also open for the supply of meals to all those arriving by air. The photograph on the left is an interior view of the lounge and that below is the outside of the club-house itself.

THE HAMPSHIRE AEROPLANE CLUB got in 300 hr. flying time during May, which included dual instruction, 111 hr. 5 min.; solo flying, 20 hr. 10 min.; "A" pilots, 155 hr. 20 min.; instructors' solo and passengers, 13 hr. 25 min. This flying time of 300 hr. is a record for the club, beating their previous best by 45 hr. This is more remarkable as they had two machines out of action during the second half of the month.

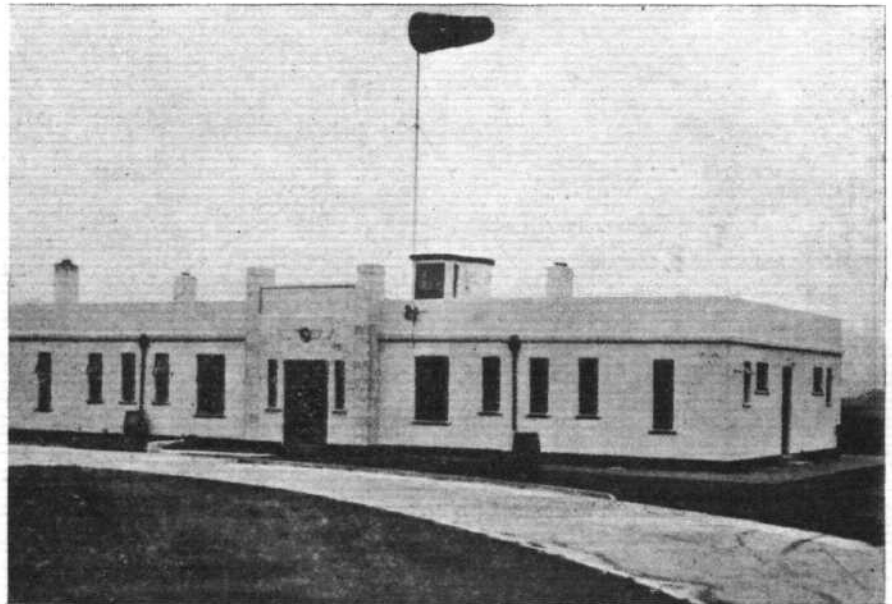
The number of members is steadily increasing, and during the month 16 more joined.

Messrs. Dalgety, Bowman and Donovan completed their tests for the "A" licence, and Messrs. Tangye, Wintour and Gould achieved successful first solos.

HANWORTH PARK. An inspection of the new air taxi service at the London Air Park, Hanworth, will be made by Lord Brentford of Newick on Saturday next, June 14.

Air taxis are now stationed at seven towns, London, Leeds, Hull, Reading, Nottingham, Blackpool and Scarborough, and other centres are in preparation. Since last August, 55 machines have been put into service, all of which are available for taxi duty when required.

A single passenger is carried for 1s. per mile; two passengers



1s. 6d.; 8 passengers, 4s. Nearly 100 aerodromes and landing grounds are available in Great Britain.

BRIGHTON GALA WEEK (June 28-July 5). It is hoped to arrange the following events on Monday, and/or Tuesday, June 30, July 1:—

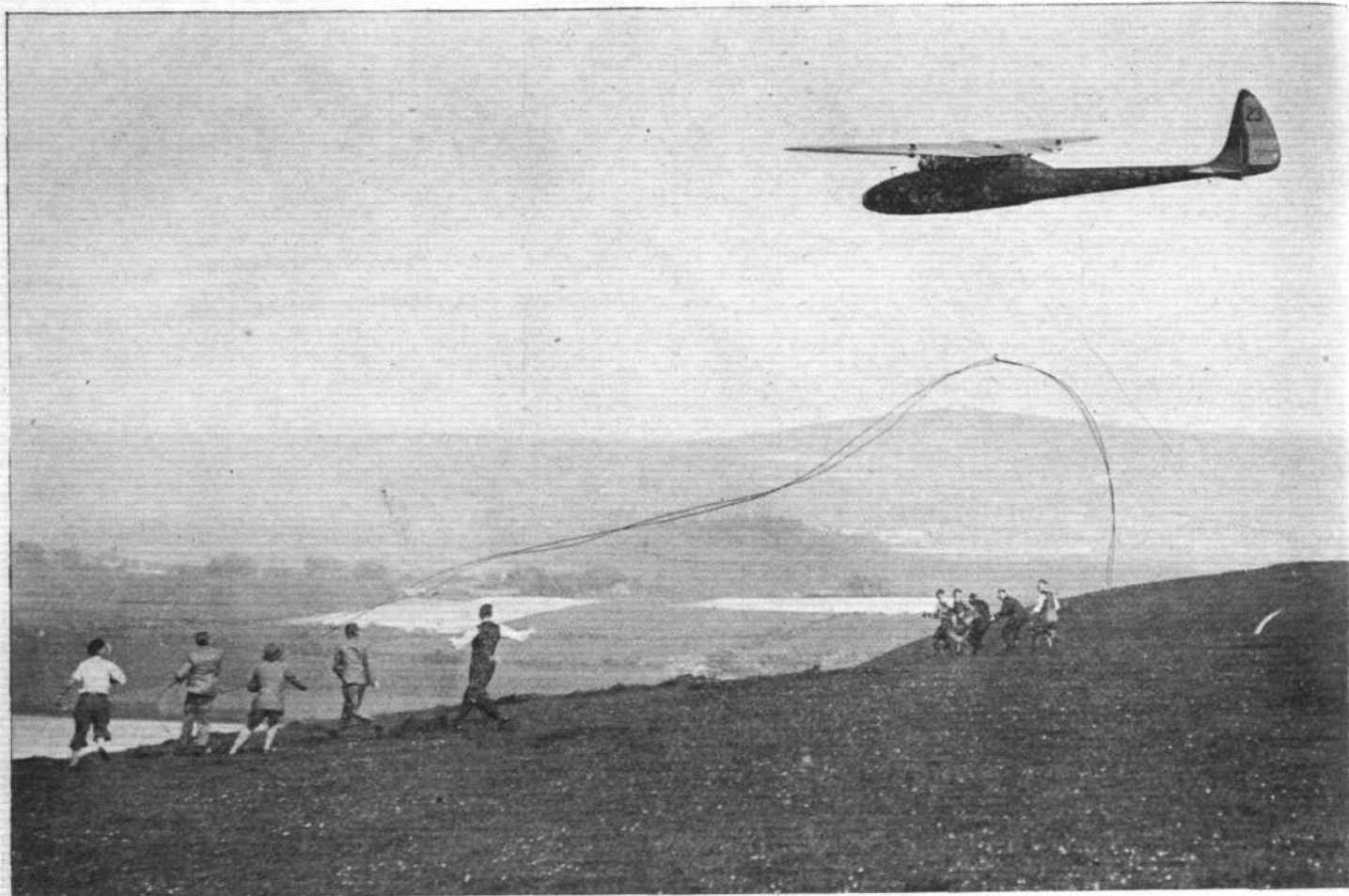
An assembly of flying-boats and seaplanes on the sea, off the Madeira Drive; a demonstration by the Autogiro; aerobatics by well-known pilots off the sea front; races, aeroplane v. speed-boats; "bombing" of speed-boats by aeroplanes; rescue race for speed boats; dummy dropped from aeroplane; rally of Light Aeroplane Club members at Shoreham Aerodrome, followed by fly past Brighton front.

All communications should be addressed to M. H. Volk, A.F.R.Ae.S., Hon. Organiser Aviation Section, Royal York Buildings, Brighton.



THE MOBILOIL CUP: This is the Cup which was won by Herr Neining, who flew from Frankfurt with Herr Fetcher in the Darmstadt D.18 (Genet Major).

GLIDING



WELL AWAY : The "Wien" just after being launched. The double cord which is used can be seen. (FLIGHT Photo.)

HERR KRONFELD'S FIRST SOARING DEMONSTRATION

ALL those who can possibly do so should go and see Herr Kronfeld soaring in his "Wien."

Mere words cannot possibly express the beauty of the machine in the air, and on first seeing it one feels that one has never realised what flying means until that moment.

Last Thursday, June 5, Herr Kronfeld carried out a few flights from Firle Beacon, near Lewes. Herr Kronfeld has come to this country at the invitation of the B.G.A., and with the good wishes of the Rhön-Rossitten Ges. of Germany in order to help put the sport on a firm basis. His demonstrations will be mainly confined to comparatively short flights which will be calculated to show the spectators what a glider of the advanced type can do and just how it flies. With this end in view he started on Thursday with a very small crowd to watch him. Those present were a few who had been invited to attend what was in the nature of a private view, and all were enthusiastic.

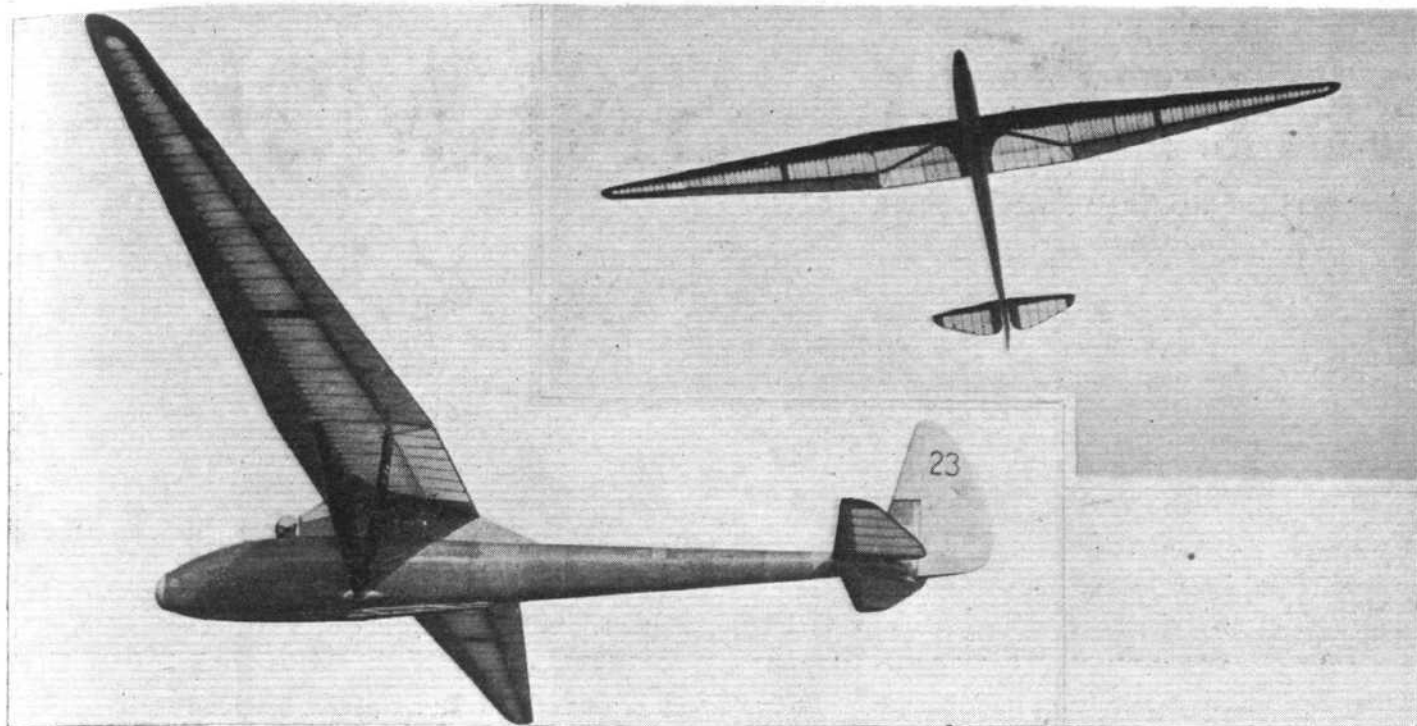
The "Wien" is transported in a crate fitted with road wheels, so that it may be towed behind a car, and it was by this means that it was taken along the Downs from a point near Itford Hill, where the hangars had been erected, to Firle Beacon, some 3 miles farther east.

A steady wind of about 20 m.p.h. was blowing, and although such a wind naturally tends to blow such large wings, as the Wien has, about if they are not carefully looked after, we were surprised to see how easily she could be erected. With four helpers the machine was ready in about 20 minutes, and was taken to the brow of the steep hill and put ready just clear of the up-current of air which the north-east wind was causing to shoot up the hill-side.

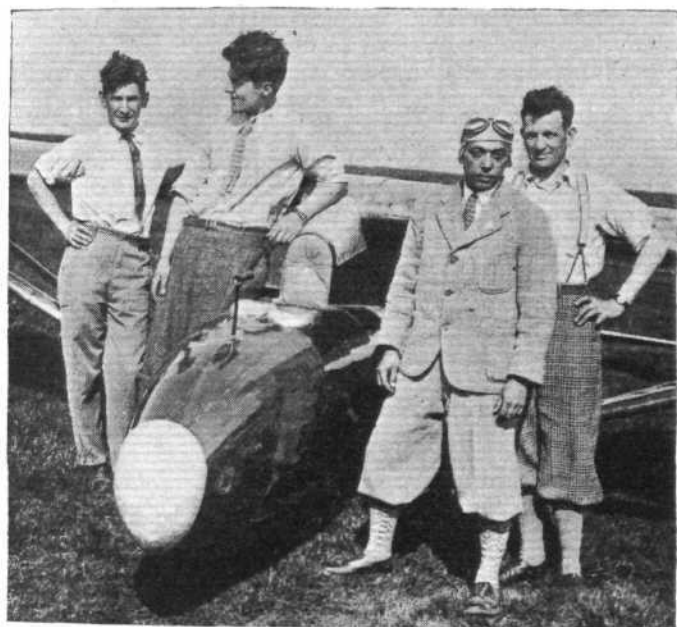
The shock-absorber cord used for launching was double $\frac{3}{8}$ in., and five men were used on each side. By this means the Wien was shot fairly high into the air, and she



DETAIL : The careful fairing of the rudder can be seen by the celluloid strip which covers the gap at the post. (FLIGHT Photo.)



BEAUTY : Two views of the *Wien* when in the air. The unpigmented dope used makes the wings almost transparent. (FLIGHT Photos.)



THE VISITORS : Herr Kronfeld has on his right his two friends Herren Flinsch and Ball and on his left is his mechanic Herr Prühn.. (FLIGHT Photo.)

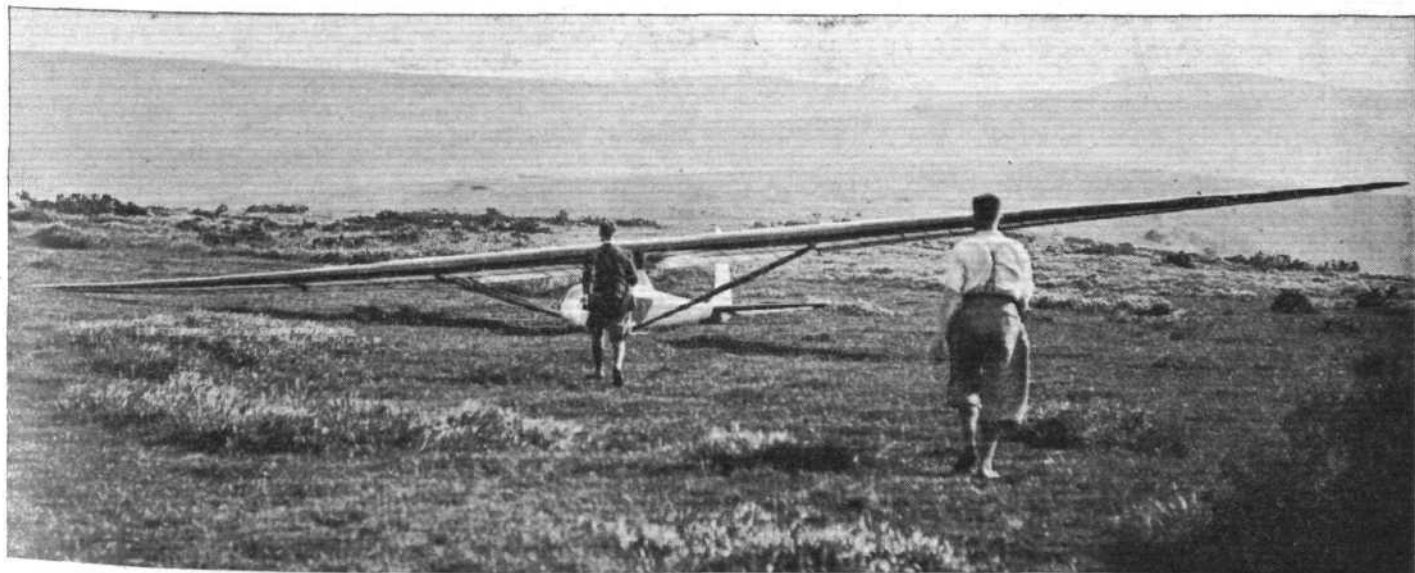
immediately started to gain height until she was soaring up and down some 700 ft. above the hill.

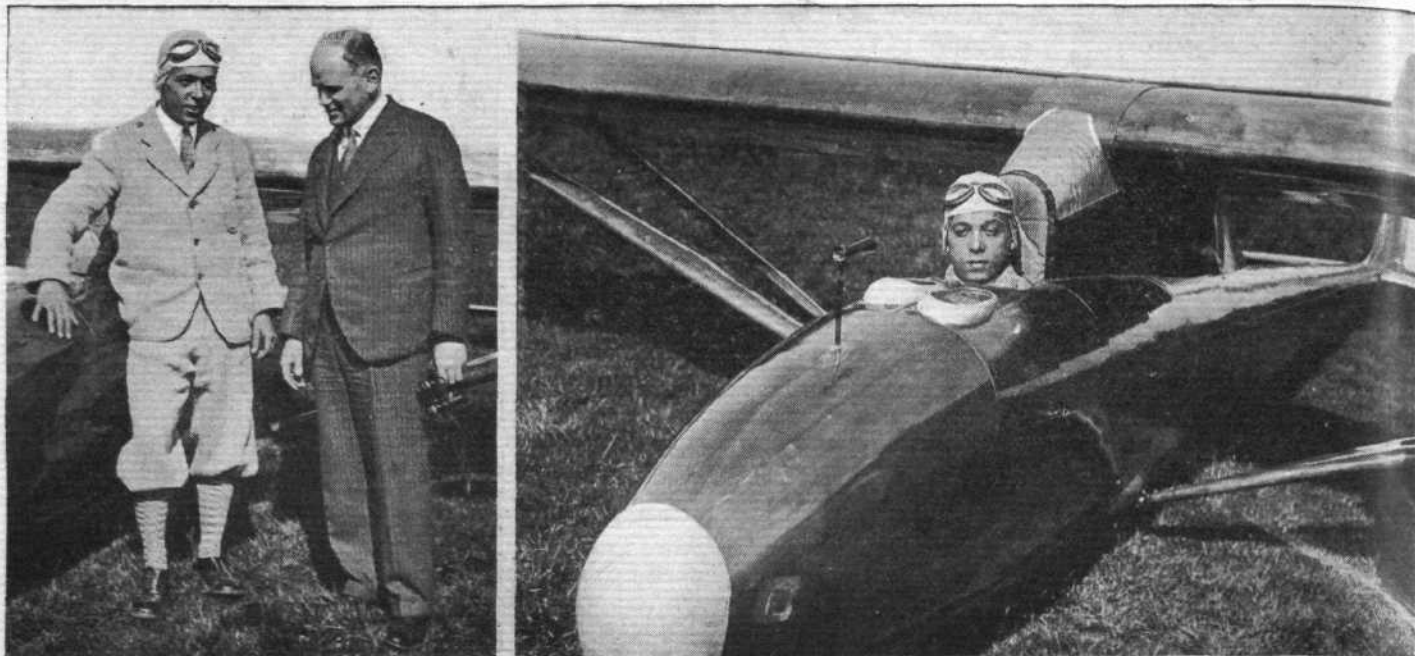
Herr Kronfeld came down and glided past us a few feet from the ground so that we could speak to him, and then later, on a subsequent flight, he said he would fly along the Downs and land by the hangars some $4\frac{1}{2}$ miles away.

During the week-end the British Gliding Association arranged for a public demonstration, and, no doubt, they expected considerable interest to be taken in it, but they cannot have anticipated the attendance that actually took place. The Sussex Constabulary had their work cut out to keep any semblance of traffic order, and both on Saturday and Sunday there was an enormous number of cars which ascended the steep hillside. The arrangements for parking cars and handling the crowd were looked after by the Piccadilly Garage, together with the help of the A.A., while Pratts, with deep-seated humour, plastered the country with their banners and wind stockings, and this at a motorless flying meeting!

The meeting was also intended as a gathering of many of the gliding clubs which have already been formed in the country. The consequence was that there was a really good

A GENTLE ONE : Below, the *Wien* just landing. Herr Kronfeld's landings would not break the proverbial box of eggs. (FLIGHT Photo.)





OUT AND IN : On the left Herr Kronfeld is talking to Mr. Gordon England and on the right he has been fitted into his cockpit! (FLIGHT Photo.)

attendance of keen enthusiasts with quite a large number of machines.

The London Gliding Club in particular turned out in great force, and out of their 80 members over 60 were there on Saturday. They had brought down their Zögling and their Prüfling, and many excellent flights were made by club members. Capt. Needham made what must constitute a record by staying up 25 minutes in the Zögling, but not content with that, he made a flight of 1 hr. 5 min. in the Prüfling and reached a height of over 500 ft. above the Downs. Among the lesser experienced members, Mr. Buxton kept the Prüfling up 16 min. on his first flight in this type, and what is more, he landed back at his starting place.

The crowd were greatly interested in these efforts and showed great appreciation when any of the longer glides were made.

Mr. Marcus Manton showed that he has not lost his cunning as he made a flight of 18 min. in the Prüfling, and later in the evening Col. Sempill also made a flight.

On Sunday the crowd was even larger, and by the time Herr Kronfeld was due to make his first flight the police had the greatest difficulty in keeping them back from the space which he required to take off from.

After carefully testing the wind in many places, he was shot up from the enclosure, and proceeded to soar along the Downs for some miles before he came back and landed close to the hangars.

Later on, Mr. Lowe-Wylde, who, it will be remembered, designed and built his own glider in a few weeks, had a flight on the Zögling, but very nearly got into difficulties, apparently owing to lack of rudder control. At one time he looked like landing in a chalk-pit, but luck was with him, and he managed to turn, and, after bumping down the hill a bit, he arrived safely at the bottom on level ground.

Mr. Lowe-Wylde has formed the Kent Gliding Club, and they brought over his machine with them.

Another club which was represented was the Dorset Gliding Club. Mr. H. J. Penrose, one of its members, came over in a Widgeon and landed in a near-by field on the south side of the hill. Incidentally, many other power-driven aircraft came over, and their pilots all seemed very interested in the gliding.

Further demonstrations are being arranged by the B.G.A., and it is hoped that Herr Kronfeld will demonstrate his truly wonderful machine at many places in the country during the coming summer.

THE LANCASHIRE AERO CLUB have accepted a challenge by the London Gliding Club to a gliding contest. The success which has attended the intensive efforts of the latter club has emboldened the members to challenge Lancashire to two contests with teams of eight glider pilots. The first will be held at Ivinghoe at the end of this month, and will be the first of its kind to be arranged in this country. The return match will be flown off in the Cheshire hills near the Bow Stones.

THE FIRST GLIDER built by a Derby firm, Sanderson and Holmes, Ltd., of London Road, Derby, to the design of Mr. E. J. Clark, secretary of the Derby and District Aero Club, was tried out at Turnditch, recently.

It has been made for Mr. G. A. Crompton, of Quarndon, a member of the Derby Aero Club, and was flown by the designer, Mr. Clark, Mr. Crompton, Mr. R. Toft, Mr. C. Smith and Mr. D. Wynn. All expressed their satisfaction with the ease of control.

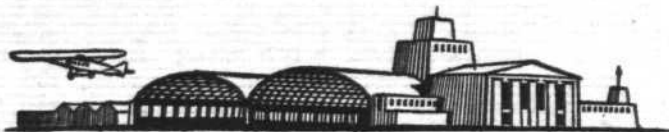
Another glider is being constructed for Mr. Toft, and

Sanderson and Holmes, Ltd., hope to produce these models in quantity to meet the demand which they anticipate in view of the increasing popularity of the new sport.

WINCHESTER has formed a Gliding Club and set it going at an influential meeting presided over by the Mayor. Sir Sefton Brancker, who is President of the British Gliding Association, attended the meeting and promised the new Club the warm support of the Association. There are now, in addition to Winchester, eighteen Gliding Clubs in this country, these being:—

Lancashire.	North Cotswold.
Kent.	Nottingham.
Harrogate.	Newcastle.
Weymouth.	Manchester.
Scarborough.	London.
Derby.	Midland.
Dorset.	Portsmouth.
Oxford.	Essex.
T.M.A.C.	Surrey.



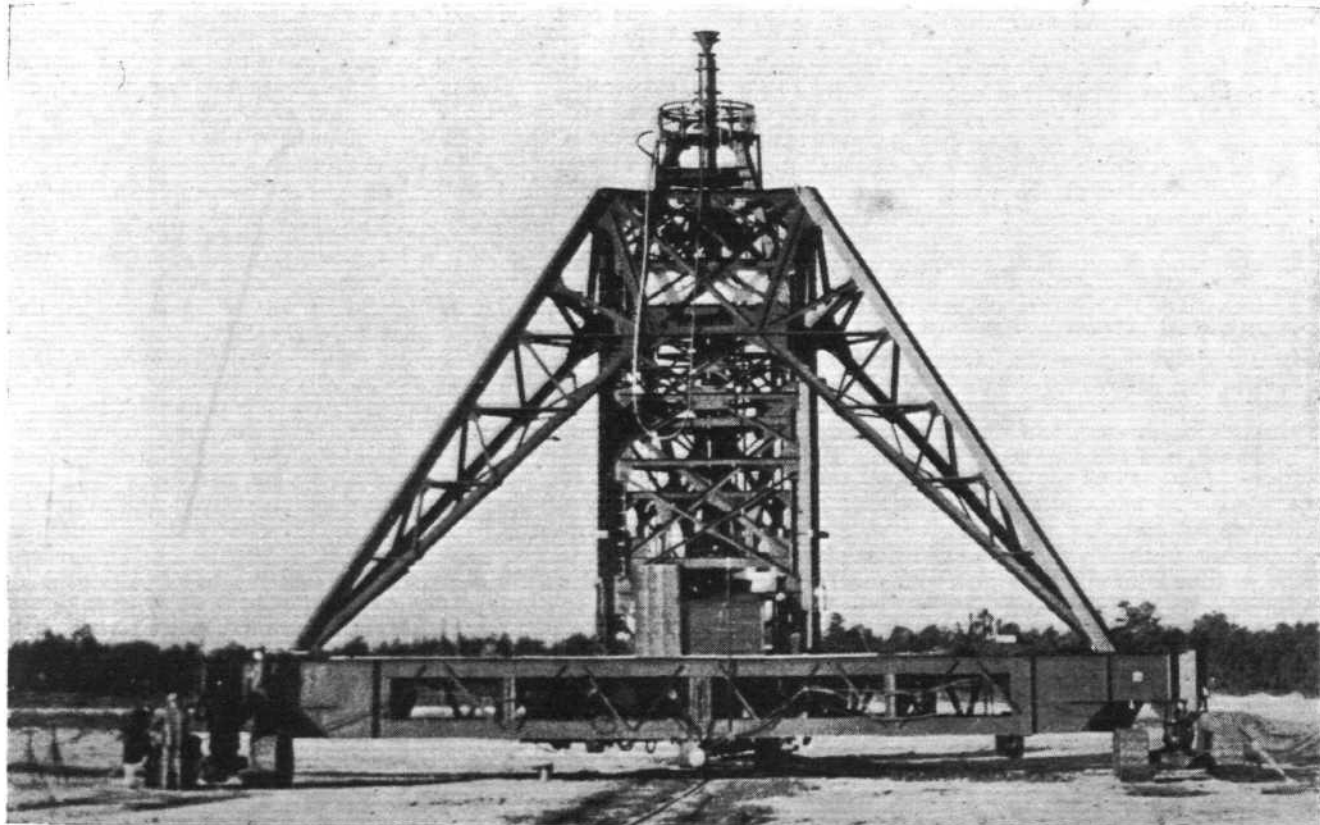


AIR TRANSPORT

THE "GRAF ZEPPELIN'S" RETURN

THE German commercial airship "Graf Zeppelin" left Lakehurst station at 10.12 p.m. on Monday, June 2, under the command of Dr. Eckener. It was nearly an hour before she cruised over the skyscrapers of New York, and then flew northwards out to sea. By 9 a.m. on the Tuesday she was reported about 800 miles away from New

York, where a heavy storm of rain and hail, but emerged from it safely a few minutes later. She reached her home at Friedrichshafen at 7.23 p.m. on Friday, June 6. Her log shows that between leaving Friedrichshafen and returning there the airship flew 18,595 miles in 298 hours 32 mins., which gives an average speed of about 61 m.p.h.



A NOVEL MOORING MAST: The new mobile mooring mast with which successful trials were recently carried out at Lakehurst, New Jersey. It will be seen that the base is equipped with small "caterpillars," which enable the mast to be moved to any suitable point for the reception of the airship. It was to this mast the "Graf Zeppelin" was moored on the occasion of her recent visit to Lakehurst.

York. Next day, Wednesday, June 4, she passed over Flores in the Azores, the scene of the last great fight of Sir Richard Grenville in the "Revenge." On Thursday, June 5, she arrived back at Seville and moored to the temporary mast at 5 p.m. She is stated to have remained there only half an hour, which seems scant time for re-fuelling and re-gassing after a crossing of the Atlantic. Then she flew back to Germany. On the way up the Rhone valley she ran into a

From the brief reports of the cruise which have appeared in the press, it would seem that international meteorology needs considerable development. The "Graf Zeppelin" encountered more than one nasty storm without, so far as we know, warning of what lay in its path. This should not occur when a proper meteorological system has been developed. An airship should always have timely warning and be able to fly round a storm.

AIRCRAFT WIRELESS

IN view of the importance of wireless reception and transmission in connection with modern commercial flying—quite apart from the military side—we think the following notes may be of interest concerning a working demonstration of the well-known Marconi Type A.D. 6h aircraft wireless equipment, which was recently given at Croydon Aerodrome for the benefit of a foreign military purchasing commission.

One set of this type was installed in the Marconi Company's Bristol Fighter, and a second set in a D.H.50, which was chartered from Imperial Airways, Ltd., for the purpose. The ground station with which communication was maintained during the tests was erected at the Marconi Company's experimental section at the Aerodrome, and consisted of a

Marconi aircraft transmitter Type A.D.18a (which has a total input of approximately 350 watts, i.e., one-tenth of the power of the Croydon Aerodrome wireless transmitter) and a receiver of approximately the same sensitivity as that used at Croydon. The aerial employed had a height of only 30 ft.

The two aircraft left the aerodrome simultaneously, the Bristol Fighter flying along a direct line between Croydon and Leamington, and the D.H.50 along a direct line joining Croydon and Lincoln.

Two-way telephonic communication was maintained between the two aircraft, on their diverging courses, as far as possible, after which the Bristol Fighter returned to the aerodrome and the D.H.50 continued until the limits of ground-to-air and air-to-ground telephonic and telegraphic

ranges were reached, test messages being passed at pre-arranged points. The results obtained, which are given below, are interesting as showing the ranges which are easily obtainable in actual practice, and in spite of severe interference which was experienced on the wavelength allotted for these tests.

With the Type A.D. 6h equipment:—Inter-aircraft

The Irish Free State becomes Airminded

DURING this month it is anticipated that we shall see the beginning of an air taxi service from Dublin to a number of other towns in Ireland, to London, and at a later date its extension to Paris and all parts of the Continent.

The machines to be used are Desoutter three-seater monoplanes. The Iona Engineering Works, a well-known firm with large works near Dublin, are the sole agents for this type of machine in the Irish Free State. They are already making additions to their factory at Glasnevin and are negotiating for the purchase of a flying-field in Dublin; in the event of these negotiations failing it is expected that they will acquire the old army aerodrome at Collinstown, a few miles outside the city.

The Irish Free State has taken a long time to wake up to the great possibilities of aerial transport; probably the chief reason for this is because the Government do not consider themselves in a position to offer any financial aid in the form of subsidies. Apart from the Irish Aero Club, there is no other civil aviation in the country which would be so useful as the headquarters of a transatlantic service. It is therefore to be hoped that the new taxi scheme will prove to the Government that there is a definite need for organized air routes.—"IRISHMAN."

West Australian Airways Statistics

Airways Bulletin gives the following statistics regarding West Australian Airways services up to March 31, 1930: Passengers carried: (Perth-Derby), 7,212; (Perth-Adelaide), 2,824; taxi and joy-ride, 13,789. Machine flights: 10,168. Miles flown: 1,469,138. Letters carried: (Perth-Derby), to January, 1930, 1,688,367; (Perth-Adelaide), 33,354 lb. Freight carried: (Perth-Derby), 296,754 lb.; (Perth-Adelaide), 15,937 lb.

A propos the Derby-Wyndham extension—to which brief reference was made in a recent issue of *FLIGHT*—the *Bulletin* states the following:—"For over eight years there has been a weekly aeroplane from Perth to Derby. Those who live on the route via Fitzroy Crossing, Hall's Creek, and the Ord River to Wyndham have felt that their claims have been

telephony range, 28 miles; air to ground telephony range, 107 miles; air to ground telegraphy range (interrupted continuous waves), 136 miles; air to ground telegraphy range (continuous waves), 200 miles; ground to air telephony range, 55 miles; ground to air telegraphy range (interrupted continuous waves), 107 miles; ground to air telegraphy range (continuous waves), 147 miles.

equally just with those of Derby to have a weekly aerial service. From the point of view of air transport, however, it is necessary to have some assurance that the necessary mails and freight, as well as passengers, will be available before any extension of service is made. Negotiations between W. A. Airways, Ltd., and the Commonwealth Government have been going on for some time, and much work has been done in the laying down of adequate and sufficient landing grounds in this area, a work in which the pastoralists themselves took a keen interest. If proposals recently submitted at the request of the Government are approved, Wyndham will be connected with Derby by air as part of the North-west air route for eight months of the year. During the mid-summer, when the monsoonal rains and tropical storms may sweep the northern coastline, the service will be suspended. A secondary reason is, of course, the fact that the Wyndham Meat Works will be closed and that a section of the residents will have come south in order to avoid the season's climatic conditions. This extension will fill a long-felt want and provide a further link in a round-Australia-by-air service."

The *Bulletin* adds that technical information recently reached Australia concerning the new Vickers "Viastra" high-wing monoplane, and so interesting is its performance that two of these machines will be employed on the West-East aerial service at an early date. These machines have two Bristol "Jupiter 11F" engines of 525 h.p. each, have accommodation for 12 passengers and can maintain a cruising speed of 140 miles an hour, with a top speed of 160 miles. The machines are of all-metal construction, including the wing covering which consists of sheet duralumin. When loaded the machine weighs about 5 tons, and it is expected that the trip to Adelaide will be negotiated in 11 hrs. as against 14 to 15 in the present type used. The 'plane provides for a mail compartment, luggage hold, toilet room, and is equipped with dual control. One feature of interest is that the machine can continue its flight with a full load with one engine stopped, while another feature is the fitting of slotted wings, both these safety precautions being of great consideration in maintaining a safe and comfortable service.

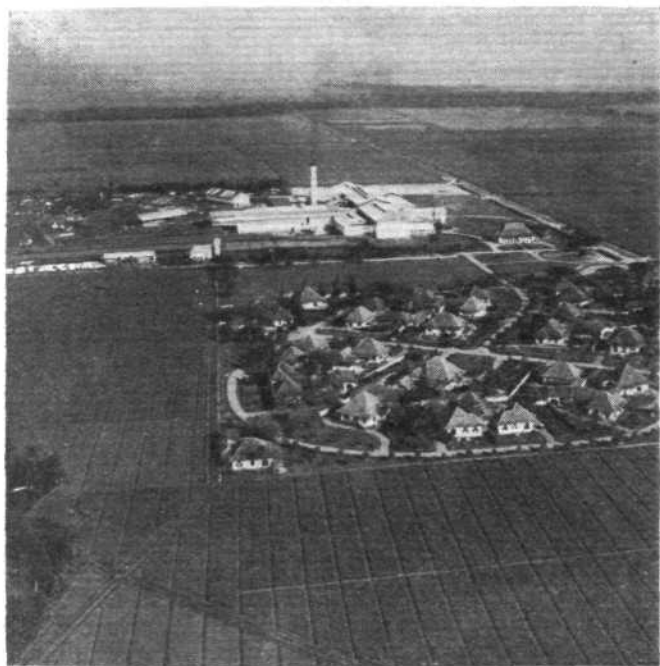


NEARLY ALL IN: The photographer did not quite succeed in catching the whole of this new Short "Calcutta." This is the machine, recently delivered to Imperial Airways, concerning which we published some impressions last week. The three engines are Bristol "Jupiters"

AIRISMS FROM THE FOUR WINDS

Miss Amy Johnson

Miss AMY JOHNSON is pardonably elated over the distinction conferred upon her by the King, but she has attained another great honour in that she has been accorded a full-page "cartoon" in *Punch*. That is fame indeed! Miss Johnson's arrival in Sydney on June 4, as briefly recorded last week, was marked by remarkable scenes of enthusiasm. She journeyed from Brisbane in an Avro 10 of National Airways, piloted by Mr. Ulm, while her "Moth," *Jason*, was flown by Capt. Brain of Q.A.N.T.A.S. Incidentally, Miss Johnson spent a couple of hours at the controls of the Avro, and declared she found it very nice to handle. After



Tjomal, Java, where Miss Amy Johnson made a forced landing on May 19.

landing at Mascot aerodrome Miss Johnson was led on to the "platform" where she received greetings from representatives of the Federal and State Governments and others, then she was driven in a car round the aerodrome. After this, Miss Johnson was "booked" for numerous engagements, not only in Sydney but in Melbourne, Canberra and other places. Meanwhile, many gifts have been showered upon her. As a recognition of her magnificent flight, the de Havilland Aircraft Co., Ltd., cabled offering her a new "Puss Moth" enclosed high-speed touring monoplane. In her cabled reply she said: "Many thanks for 'Puss Moth,' which is the machine I have most desired to possess. The possession of a super aeroplane will not make me forget the wonderful service given by my dear old *Jason*." Her new 'plane will be ready for her directly she returns.

The Vincennes Air Meeting

Two very successful "national air days" were held at Vincennes on Sunday and Monday last, at which some 350 civil and military machines participated. Exceptionally fine weather attracted large crowds, estimated at over 30,000 on both days. President Doumergue and M. Laurent Eynac, French Air Minister, accompanied by the President of the Aero Club of France, were present and made a tour of inspection of the machines. An interesting and varied programme was arranged on both days, the principal event on the Sunday being the start of a two-day race to Bordeaux and back for a prize given by M. Doumergue. Another popular item was a fly past of aircraft of various types from the Bleriot monoplane of 1909 up to the very latest design. This proved to be an excellent demonstration of the advance made in aviation during the past 21 years, especially as it was emphasised by the arrival from Morocco of the Airopostale lat 28 mail 'plane with mails from South America. The Bernard monoplane *Yellow Bird* flown by Assolant, Lotti and Lefevre in their Atlantic "raid," and Costes' and Bellonte's Breguet *Question Mark*, were two interesting machines present.

Well-known pilots gave demonstrations of exhibition and aerobatic flying on both days, while Monday's programme comprised mainly of Service events, including a "set piece." **Junkers "Junior" establishes Records**

RECENTLY a Junkers "Junior" machine put up some very good flights, piloted by Zimmermann Grundke, and as a result, five world's records for light 'planes have been submitted to the F.A.I. for homologation. The "Junior" had been fitted with floats, and the following results were obtained:—Altitude (two people on board), 4,700 m. (15,400 ft.); altitude (pilot solo), 5,700 m. (18,700 ft.). A measured course of 50 km. was then laid out, and a flight of 8 hr. 27 min. was made over this course, with two people on board. During this flight, which established a new duration record for light seaplanes, the average speed over 100 km. (i.e., twice over the course) was 164 km./hr. (101.75 m.p.h.), and the distance covered in the 8½ hours was 900 km. (558 miles), claimed as another record.

Mount Batten to Basra

Two Southampton flying-boats belonging to No. 203 (Flying-Boat) Squadron left Mount Batten, Plymouth, on Saturday, June 7, to fly to their station at Basra. The officers on board are Flight-Lieuts. W. J. Daddo-Langlois and A. P. Revington, and Pilot Officers G. Barrett and F. R. Drew.

Air Transport in New Zealand

It is reported that a company with a capital of a quarter of a million sterling is being formed in New Zealand to link the four main centres of the Dominion with a daily air service. The report states that the fleet will consist of four aeroplanes.

The F.A.I.

THE annual congress of the Federation Aeronautique Internationale opened at Paris on June 10, with M. Laurent Eynac, the French Air Minister, in the chair. The meeting coincided with the 25th anniversary of the founding of the F.A.I. by the Comte de la Vaulx, who was recently killed in a flying accident in the United States. The election of a new president in place of the late Comte is one of the items on the agenda.

Australia and the Grand Trunk Air Line

MR. SCULLIN, the Australian Premier, has stated that during the forthcoming Imperial Conference he would discuss the air service between Great Britain and the Commonwealth with Lord Thomson. He said that his Government was naturally sympathetic. Australia's share of the subsidy for the Singapore-Darwin link would amount to £600,000 spread over five years.

An Experimental Inland Service

THE Corporations of Liverpool, Manchester, and Birmingham have substantially agreed to finance for three months an air service, running three times a week, to link those cities with the continental services at Croydon. The service is regarded as an experiment to test local requirements, and it is hoped that it may be opened this month.

The Dakar-Natal Service

THE French Aero-Postal Co. hopes to have mail aeroplanes crossing the Atlantic from both ends at the same time. The service is to reach this stage of development in the very near future.

German War Pilots Killed

Two distinguished German war pilots are reported to have been killed recently in crashes on the North American continent. Herr Kurt Stollwerck crashed into the sea off Long Beach, Long Island, U.S.A., on June 2; and Herr Paul Garten, who is said to have been a member of the Richthofen "Circus," and to have 18 victories to his credit, crashed his seaplane into a lake in north-western Ontario and was drowned.

Night Mail Services Suggested

THE Civil Aviation Section of the London Chamber of Commerce has suggested to the Air Minister that non-stop night air mail services should be started to certain continental centres about 1,000 miles distant from London. The service should be for mails only, and bags should be dropped at important intermediate stations. A saving of from 1½ to 2 days in the delivery of mails to the terminal points would thus be effected.

The Swiss Military Air Arm

THE Switzerland National Council has voted £800,000 for the military air arm. This sum provides for the purchase of 105 new aeroplanes.

No. 70 (B) Squadron Reunion

It has been decided to hold an informal reunion dinner of past and present officers of No. 70 (B) Squadron on Friday, June 20, at the Connaught Rooms, Great Queen Street, W.C.2, at 8 o'clock for 8.15. Dinner jackets (no decoration); tickets 10s. 6d., to be collected at the dinner. Will anyone desirous of attending kindly forward names to Gp.-Cpt. H. R. Nicholl, Room 532, Air Ministry, by June 17.

Le Bourget to be Replaced

To air travellers the aerodrome of Le Bourget must be as well known as the Gare du Nord or the Gare de Lyons is to the old-fashioned traveller. The statement made by M. Laurent Eynac the other day to the effect that Le Bourget will be replaced by another airport will come as somewhat of a shock to pilots and travellers by air. The new port is to cost £1,200,000; and £800,000 is to be spent on subsidiary structures. The total French expenditure on flying in the near future is to total £16,000,000. New air lines are contemplated to the Far East, the Congo, and Madagascar.

Spanish Decoration

THE KING has granted permission to Charles John Pirie, Master of the *Gylden*, to wear the insignia of the Order of Naval Merit (First Class), conferred on him by the King of Spain for helping to rescue a Spanish Dornier seaplane.

Change Your Petrol

OIL companies have for many years recommended changing the grade of lubricating oil according to the season; but, in announcing a new blend of No. 1 petrol, called "Summer Shell," the Shell people are the first in the field to provide alternative fuels for winter and summer use. This new summer petrol was available at the same price as "winter" petrol on May 1 last. In winter the ideal fuel should contain a big proportion of volatile elements to ensure quick starting. In summer, on the other hand, volatility is not so necessary, and may be a definite drawback, since a very volatile fuel on a hot summer day would waste away far too quickly, with a consequent serious reduction in mileage. In blending

Summer Shell, therefore, the aim has been to subtract the superfluous, volatile quick-starting elements from "winter" Shell, and to replace them with those which will maintain the mileage, and balance with the rest of the blend to give the utmost pulling power, ensure easy, rapid acceleration and be proof against "knocking."

Sir Walter Nicholson's Appointment

THE Air Ministry announces that Lord Thomson, the Secretary of State for Air, has nominated Sir Walter Nicholson, who has now completed ten years' service as Secretary of the Air Ministry, to be a Government Director on the Board of Imperial Airways, Limited, in succession to Sir Herbert Hambling, Bart.

New Altitude Record?

THE U.S. Bureau of Standards has announced that Lieut. Apollo Soucek, of the United States Navy, had established a new world height record on June 4, when he reached 43,166 ft. in his aeroplane, beating the record of Herr Neunhofer, of Germany, by over 1,000 ft.

A Bonnella Celebration

MR. D. H. BONNELLA, founder of the old-established aeronautical, electrical, and mechanical engineering firm of D. H. Bonnella & Sons, Ltd., of 46-48, Osnaburgh Street, Euston Road, London, celebrated his ninetieth birthday on April 26 last, and to mark the occasion, the services of those employees who had been with the firm five years and over were suitably recognised, while the clerical staff and works superintendents were entertained to dinner at the Trocadero Restaurant and afterwards at the Coliseum on Wednesday, May 21. Mr. A. J. Bonnella, managing director, presided in the unavoidable absence of Mr. D. H. Bonnella. In proposing the toast of the evening, Mr. W. H. Farthing referred to the impressions he had formed of the changes and progress made during the 29 years he had been in the service of the firm. Mr. D. H. Bonnella continues to enjoy fairly good health, and only ceased attending the office daily about two and a half years ago.



"SEAGULLS" IN TASMANIA: Our picture shows a fleet of Supermarine Napier ("Lion") "Seagull" amphibian flying-boats of the Royal Australian Air Force flying above Hobart, Tasmania, and gives some idea of the country which these machines have to fly over.

"HIGH ALTITUDE EQUIPMENT OF AIRCRAFT"

A Lecture by Major C. J. Stewart, O.B.E., F.R.A.S., before Westland Aircraft Society, at Yeovil

MAJOR C. J. STEWART, O.B.E., F.R.A.S., of the Royal Aircraft Establishment, dealt with the subject of "High Altitude Equipment of Aircraft," in a lecture before the members of the Westland Aircraft Society, on Friday, April 4, at the Three Choughs Hotel, Yeovil, illustrated by about 30 slides. Mr. A. Davenport presided.

Though of a highly technical nature, the subject was so ably presented that all present were deeply interested, and a vein of humour, quite un-anticipated by a glance at the title, increased interest in the subject.

To impress the importance of oxygen supply at high altitudes, Major Stewart opened by quoting cases where, owing to failure of the supply in low temperatures, pilots had fainted and machines had come down out of control. Machines left the ground with the oxygen apparatus in good order, and were again examined on landing and found to be perfect—yet the supply had failed in the air.

After a considerable research the trouble was traced to the presence of a small amount of water vapour in the oxygen in high-pressure cylinders, which, owing to the lowering of temperature at high altitudes, caused a small orifice in the reducing valve to become choked with ice, delivery ceasing as a result.

Further research had resulted in re-design of the reducing valve, a spring-operated diaphragm and ebonite plunger being incorporated, the slight oscillations of this breaking up the ice which is blown clear, giving unrestricted supply. Subsequent tests have confirmed reliability.

Major Stewart then passed to the heating of pilots' clothing (extended to include goggles) by the incorporation of resistance wire, electrical energy being derived from a wind-driven generator mounted externally on the aircraft.

Owing to the introduction of a fireproof bulkhead, complaints were received from pilots that they were deprived of heat from the engine and felt much colder when flying, giving rise to the necessity for heating the cockpit. Experiments carried out with a water radiator circulating water from the engine jackets failed, owing to added complicity of the water system, and the difficulty was overcome by air heated in a muff round the exhaust pipe being carried to the cockpit, the temperature therein being adjusted by a butterfly valve.

Certain controls of rudder, ailerons, etc., are known to stiffen as the machine climbs and temperature becomes lower, due to the use of lubricants in bearings of any levers, the unequal contraction of the wire forming the controls and frame of the aircraft and the deposition of moisture, on bearings, levers, etc., with subsequent freezing.

Stiffness must remain if lubricants are used. Mathematical investigations have shown that the amount of stiffening due to unequal contractions is negligible. The deposition of moisture cannot very well be prevented, experiments are difficult to carry out—and results uncertain, the humidity of the atmosphere varying from hour to hour and may be

different at different altitudes, but further laboratory and full-scale tests are yet to be made. Meantime non-freezing lubricants, such as gun oil are being used.

Major Stewart then asked for questions, and Mr. Gaunt queried the sudden increase in slope of curve indicating required oxygen supply at varying altitudes. The lecturer said at 20,000 ft. immediate increase in supply was necessary. This increase having been decided after the Mount Everest climb.

Mr. Davenport remarked on the curious shape of baffles on muff, asking if there was any particular reason for this. Major Stewart replied that there was none, and shape did not matter.

Mr. Penrose asked if the vacuum of a vessel deteriorates owing to the property of absorption, *i.e.*, that the metallic surface absorbs gases. The lecturer replied it had been thought that the surface of a metal absorbed gases which only come off very slowly in a vacuum. An elaborate test for this in one instance had, however, only indicated an air leak. Most leaks were due to imperfect joints and not necessarily through the walls of the vessel.

In reply to Mr. Gaunt, Major Stewart emphasised that every thing in a high-pressure oxygen system should be tested with soap solution to check for leakage.

Mr. Penrose asked "If oxygen is used correctly, are there any ill effects after a climb?" In one instance, after a climb to about 25,000 ft., he had apparently used the oxygen correctly, but, some time after landing it had apparently caused rather a feeling of depression. Why was this?

Major Stewart said there should be no feeling of physical discomfort if the oxygen is rightly used. He had himself never experienced discomfort after a climb. It was true, however, that a high climb greatly reduced the physical powers if oxygen were not used. The essential use for oxygen was to prevent the dulling of the senses and the diminishment of strength, and the oxygen supply, therefore, was arranged to produce normal breathing as at ground level.

Replying to a member, it was stated that the high-pressure cylinder is not bullet-proof, but will not shatter.

A member questioned whether oxygen in clothing, to be absorbed by the body, had been tried? Body will not absorb by this method.

In reply to Mr. Gaunt, Major Stewart said that it was most essential that the mask should be a good fit, and that it should be a personal issue.

A member asked if protection for the pilot's face was considered? Yes, the face should be smothered in lanoline, and a Balaclava helmet should be worn.

Mr. Davenport asked Mr. Mattam to propose a vote of thanks. In doing so, Mr. Mattam said he was sorry for pilots who had to fly at high altitudes, and also sorry for members of the Westland Aircraft Society who had not been present that evening, assuring Major Stewart that those who were present were very grateful to him for the interesting manner in which the lecture had been delivered.

R.A.F. SPORT

RIFLE SHOOTING AT BISLEY.

The R.A.F. rifle meeting opened at Bisley on June 3. Corpl. C. Willott, of Eastchurch, won the championship for the second time. Oxford won the Inter-University Squads match. In an Inter-Services match the Civil Service beat the R.A.F. The principal results were:—

THE RIFLE CHAMPIONSHIP

	1st Stage	Final Stage	Agg.
1 Cpl. C. Willott, Eastchurch .. (Duke of Sutherland's Cup and N.R.A. and R.A.F. Silver Medals.)	168	172	340
2 Flight-Lieut. C. W. Hill, Henlow ..	158	171	329
3 Sgt. A. Worden, Wittering ..	168	156	324
4 L.A.C. W. Hall, Cranwell ..	153	166	319
5 Flight-Lieut. E. R. C. Hobson, Air Min. ..	165	151	316
6 Sgt. J. Goude, Gosport ..	164	151	315
7 Flight-Sgt. J. Burton, Eastchurch ..	162	153	315
8 Flight-Lieut. G. H. Stainforth, Uxbridge ..	147	167	314
9 L.A.C. S. T. Carpenter, Sealand ..	157	157	314
10 Sqdn.-Ldr. T. S. Ivens, Andover ..	154	156	310

UNIVERSITIES' INTER-SQUADRON MATCH.—S.R.b.; King's 2nd Stage; h.p.s., 600 pts.

1. Oxford Univ.—Wing-Comdr. A. G. R. Garrod, 140; C. M. Harris, 136; W. B. Thompson, 134; D. Beevers, 131; total, 541.

2. Cambridge Univ.—E. D. Fry, 130; T. C. Worth, 126; H. St. G. Burke, 122; Wing-Comdr. Vernon Brown, 121; total, 499.

SERVICES MATCH

(King's second-stage conditions; h.p.s., 1,200 pts.)

	300 yds.	500 yds.	600 yds.	Total.
1. CIVIL SERVICE:—				
A. V. Greaves	47	45	49	141
R. S. Bouttell	46	48	46	140
E. H. Budge	44	50	45	139
H. J. Vodden	43	48	47	138
W. E. Wood	44	47	46	137
R. J. Sparks	46	46	43	135
C. Hooker	44	44	45	133
Lieut.-Col. H. W. Chapman ..	43	46	44	133
	357	374	365	1,096
2. ROYAL AIR FORCE:—				
A.C. D. Paul	48	46	45	139
Cpl. C. Willott	48	47	44	139
F/O. H. H. Ellison	46	47	45	138
Pilot-Officer J. E. C. McClure ..	46	47	44	137
Flight-Lieut. G. H. Stainforth ..	43	46	47	136
Wing-Comdr. A. T. Whitelock ..	45	46	45	136
L.A.C. W. Hall	45	45	45	135
Flight-Lieut. E. R. C. Hobson ..	44	48	42	134
	365	372	357	1,094

CROYDON WEEKLY NOTES

REFERRING to "Friends of Our Youth," another of the "Old Brigade"—M. Robert Labouchere—turned up on Monday from Paris on a Potez four-seater monoplane 230 h.p. Salmson. M. Labouchere, who is a cousin of the late Hubert Latham, flew the "Antoinette Mono" in 1908, and was one of the original Civil pilots, and technical manager of the "Grands Express Aeriennes."

Now a director of the Potez Company, he is probably one of the oldest pilots still functioning. He flew his machine back to Paris on Thursday.

Whilst on the subject of our French confrères, it is interesting to note that the Air Union "Golden Ray" service has been operating for over eighteen months without a single forced landing owing to engine trouble or machine defect, and one recalls a most delightful flight to Marseilles and back in 13 hours actual flying time with M. Delage—famously known as "Captain Ship," to which soubriquet he is justly entitled, having earned it in the defence of pilots' rights, when, during a slight altercation with the ground staff, he rose in righteous wrath in his cockpit and in a loud voice exclaimed: "Me take no orders. Me 'Captain Ship.'"

After many engine and wireless tests, Capt. Kingsford-Smith, and Mr. Vandye, left for Baldonnell on Wednesday, the 4th inst., on the "Southern Cross"—their organisation is wonderful, every minute detail has been carefully worked out, and all are confident of success.

Photographs of the Derby were on an Imperial Airways' liner at 5 p.m. for Paris and Berlin the same evening. Since these had to be taken from the course to London to be developed and printed, and then sent back to Croydon, it constitutes a pretty swift piece of work.

One had the opportunity of observing the installation and performance of the "Hermes" engine in four different types of aircraft during the past few days.

Mr. Art Fowler has been flying the A.D.C. "Hermes" Avian.

Capt. Bonham-Carter arrived on Tuesday piloting the very neat Parnall Elf "Hermes."

The Hon. A. E. Guinness' "Hermes" Moth Amphibian, piloted by Mr. Allison, also arrived and is now in the A.D.C. sheds.

And Miss W. E. Spooner flew from Croydon to Paris return with Lady Currie, on one of the latest "Hermes-Desoutter"

Sports Coupés, her time being just 2 hours each way. The question one would like to ask is: "How does the Desoutter suit-'er?"

I.A.L. alone dealt with over 150 passengers on Friday, and every possible available aircraft was pressed into service.

The pilots say that Berck aerodrome resembled an aviation meeting owing to the congestion of machines there. Croydon was just as bad, if not worse. Who says we are not getting air-minded?—better late than never!!!

Lieut.-Col. Henderson is doing a roaring trade on his Junkers "13"—joy-riding. The monoplane evidently takes the public fancy, for it is never on the ground more than 10 minutes together.

The British Petroleum Company, who for some time past have specialised in mobile petrol facilities for private aircraft owners, have now augmented their plant by specially designed vehicles equipped with hose, pumps, etc., for supplying 2 to 100 gallons. These will be seen

at all forthcoming aviation meetings throughout the country under the able supervision of Mr. John Ibell, whose indefatigable assistance is already so well known to many private owners.

Traffic for the week ending June 5 includes over 75 tons of goods and 1,200 passengers.

The senior pilots of the Imperial Airways are now adorned with three rings on their uniform coat sleeves so they will presumably be addressed as "Commandairs." Those entitled to this distinction are the pioneers of civil aviation, and on them lies the credit for building up the wonderful record of safety for which our air lines are justly renowned.



Miss Winifred Spooner with Lady Currie just before their trip to Paris in the Hermes-Desoutter.

NEW FOCKE-WULF "ENTE"

IN our issue of September 29, 1927, we gave an illustrated description of the "tail-first" monoplane, which had then recently been produced by the Focke-Wulf Co., of Bremen, Germany. Some time afterwards it became our painful duty to announce that one of the directors of the firm, Dr. Wulf, lost his life in an accident to the machine he was piloting. We took considerable pains to ascertain the exact cause of the accident, and were informed by the makers of the machine that the accident seemed due to some lack of balance between the offset thrust of one engine (the other was stopped) and the lateral lift component of the laterally-tilted front elevator, which in that machine was arranged to tilt around a fore-and-aft axis so as to assist the rear rudder when the machine was flying on one engine. At the time we stated that the accident appeared to be caused by a feature of design not essential to the tail-first principle, and we learned some time ago that the Focke-Wulf Company shared that view, and intended to continue the research so ably initiated by Dr. Wulf some three years ago.

The Focke-Wulf firm sent us the photograph of the latest "Ente," which we reproduced on page 570, in our issue for May 23, with the statement that the machine was flown for

the first time recently by Herr Cornelius Edzard. No further data are available at the moment, but when the machine has been more fully tested we hope to be able to give a detailed description of it.

In the meantime, an inspection of the photograph seems to indicate that the new "Ente" resembles the earlier machine very closely. An addition is, however, to be noted in the outboard wing rudders, which were not fitted on the first machine. It seems probable that the lateral tilting of the front elevator has now been abandoned (being the feature thought to have caused the accident which resulted in Dr. Wulf losing his life), and that the outboard wing rudders have been added so as to act as drag rudders. That the machine should be capable of flying on one engine appears doubtful, since to the drag of the stationary airscrew will then be added the drag of the outboard wing rudder on the other side.

The "Ente" or "tail-first" arrangement is of great interest, because not only can a machine employing this principle be so designed as to be incapable of being stalled and spun, but with the fuselage projecting far forward, such a machine can be landed on very rough ground, or with wheels locked by brakes, without fear of it overturning.

THE ROYAL AIR FORCE

London Gazette, June 3, 1930.

General Duties Branch

Flying Officer V. J. Sofiano, R.A.F.O., is granted a short service commn. on the Supplementary List as Flying Officer, with effect from May 26 and with seniority of September 6, 1926. The following Pilot Officers are promoted to rank of Flying Officer:—G. H. Clarke (March 14); J. S. Tanner (April 8); R. P. Garnons-Williams (April 12); A. H. Abbott (May 2); W. H. E. Tew (May 25). Pilot Officer on probation C. W. Black is confirmed in rank and promoted to rank of Flying Officer (May 25).

Squadron Leader J. S. T. Fall, D.S.C., A.F.C., is placed on half-pay list, Scale B (June 1 to July 31 inclusive). Flight-Lieut. G. R. Beamish is placed on half-pay list, Scale B (June 1). Squadron Leader A. H. Measures, O.B.E., is placed on retired list, and is granted permission to retain rank of Wing Commander (June 1). The following Squadron Leaders are placed on retired list on account of ill-health (June 1):—E. J. C. Roberts, A. S. C. S. MacLaren, O.B.E., M.C., D.F.C., A.F.C. Flying Officer J. A. Greenshields is transferred to Reserve, Class C (May 19).

Medical Branch

The short service commn. of Flying Officer G. W. Paton, M.B., Ch.B., is antedated to June 1, 1928. Flight-Lieut. E. P. Carroll, L.R.C.P., and S., is transferred to the Reserve, Class D (ii) (June 1).

RESERVE OF AIR FORCE OFFICERS

General Duties Branch

J. H. Gladstone is granted commn. in Class AA (ii) as a Pilot Officer on probation (May 19). The following Pilot Officers on probation are confirmed in rank:—W. R. P. K. Mason (April 11); G. C. Gould (April 13); L. F. Stanley (April 27). Pilot Officer C. Langley is promoted to rank of Flying Officer (April 22); Flying Officer C. W. Carter is transferred from Class AA (ii) to Class C (October 5, 1929); Flying Officer L. W. Van Oppen is transferred from Class C to Class AA (ii) (May 14); Flying Officer V. J. Sofiano relinquishes his commn. on appointment to a short service commn. on Supplementary List, R.A.F. (May 26).

The following Flying Officers relinquish their commns. on completion of service:—G. W. Dean (May 1); H. B. Williams (May 3).

Flying Officer E. T. Shone is removed from the Service (May 22).

Medical Branch

Flight-Lieut. J. A. Quin, M.B., B.A., ceases to be employed with the Regular Air Force (June 4).

AUXILIARY AIR FORCE

General Duties Branch

No. 605 (COUNTY OF WARWICK) (BOMBER) SQUADRON.—Flying Officer J. C. Rowland relinquishes his comm. on account of ill-health and is permitted to retain his rank (June 4).

ROYAL AIR FORCE INTELLIGENCE

Appointments—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Squadron-Leader: J. S. T. Fall, D.S.C., A.F.C., to Half-pay List: 1.6.30. J. J. Williamson, A.F.C., to No. 5 Flying Training School, Sealand; 2.6.30.

Flight-Lieuts.: E. Drudge, M.B.E., to No. 203 Sqdn., Iraq; 19.4.30. G. R. Beamish, to Half-Pay List; 1.6.30. A. W. Bates, to R.A.F. Depot, Uxbridge; 11.5.30. J. F. F. Pain, to No. 208 Sqdn., India; 7.5.30. B. T. Hood, to Station H.Q., Worthy Down; 27.5.30.



IN PARLIAMENT

Army and Air Force Indian Officers' Training

LIUT.-COMMANDER KENWORTHY on June 2 asked the Secretary of State for India whether he is in a position to make an announcement with regard to the future arrangements for training young Indian gentlemen in India for commissions in His Majesty's Army and the Royal Air Force; and whether the proposed training schemes in India will supersede the present system of sending selected gentlemen to Sandhurst, Woolwich, and Cranwell?

Mr. Benn: I am afraid I can say no more than I said last Monday, that we are well within sight of the limits of absorption of Sandhurst, and therefore of the time when an Indian Sandhurst will become a very live question. This is being borne constantly in mind; but future arrangements cannot yet be given a definite shape until we know for certain that a steady supply of suitable candidates has established itself. The indications are that that may happen in a short time.

Airships

LIUT.-COMMANDER KENWORTHY, on June 4, asked the Under-Secretary of State for Air what is the cost of the design contract for the new airship that has been given out; and whether this will involve a supplementary Estimate.

Mr. Montague: In answer to the first part of the question, the contract is not for the elaboration of a complete new airship design, but for the employment of a technical staff partly to investigate possible detail improvements in the design of R 100 and partly to discover what improvements and modifications to the R 100 type of airship would be necessary, if it were decided to build an airship of capacity greater than 5,000,000 cub. ft. There is a limit of £2,000 a month to the payments under the contract; expenditure to date is £7,800. The answer to the second part of the question is in the negative; provision for this service is made in Air Estimates, 1730, Vote 3 N. There is no design of a new airship, because a new airship has not been authorised.

Mr. Wells: Is it contemplated to design a new airship of more than 5,000,000 cub. ft.?



PERSONALS

Married

Flight-Lieut. JOHN DUMINY, R.A.F., was married on May 24, 1930, in London, to JANET RAMSAY, elder daughter of Mr. and Mrs. ALLAN STEWART, Bonally, Kenley, Surrey.

Group Captain J. H. A. LANDON, D.S.O., O.B.E., R.A.F., only son of Col. and Mrs. Landon, The Old Cottage, Brentwood, Essex, was married on June 2 at All Saints' Church, Wing, Bucks, to BIDDY, younger daughter of Col. T. R. P. WARREN, C.B.E., Chief Constable of Buckinghamshire, and Mrs. T. R. P. Warren, of Wing Lodge, Bucks.

On May 9, at St. Thomas's Cathedral, Bombay, PATRICK EDWIN BERRYMAN, R.A.F., son of Mr. and Mrs. A. Cassels Berryman, of Berkhamsted, Herts, was married to EDITH KATHLEEN (KITTY) SHIPTON, daughter of the late Leonard Shipton, Ceylon Government Service, and Mrs. Shipton, of Bedford.

Squadron-Leader ALAN LEES, R.A.F., elder son of Mr. and Mrs. Maurice Lees, Park Bridge, Ashton-under-Lyne, was married on June 2, at St. Andrew's, North Weald, to NORAH ELIZABETH, second daughter of the late JOHN THOMPSON and Mrs. Thompson, St. Oswald's, West Hartlepool.

On June 7, at Holy Innocents Church, Lamarsh, PHILIP EDWARD GERALD SAYER, son of Wing-Commander E. J. Sayer, R.A.F. (Ret.), was married to MAY VIOLET ELLEN, daughter of the Rev. J. W. WALLACE SMYTH, Lamarsh Rectory, Bures.

To be Married

A marriage has been arranged between Wing-Commander DERMOTT L.

Mr. Montague: No; the word "contemplated" is not appropriate. The matter is one of policy, which must be decided some time in the future. In the meantime, it is desirable to keep the technical staff in being.

In reply to Mr. L'Estrange Malone, Mr. Montague said it is hoped that R 100 will be ready for her flight to Canada towards the end of this month or the beginning of July. While her sister ship is in Canada R 101 will carry out some experimental flying in this country, and will then be put back in her shed for the insertion of the extra bay. When the extra bay has been installed, R 101 will undertake her experimental flight to India. I am not in a position to name a precise date for this flight.

Speed Record and Loaned Machines

SIR GEORGE HAMILTON asked the Under-Secretary of State for Air whether, seeing that, as a result of representations made to him by the Australian Government, His Majesty's Government have agreed to lend a 2,000 h.p. engine for an attempt on the world's speed record by a private individual, His Majesty's Government will do the same for any resident in Great Britain or Northern Ireland?

Mr. Montague: The Australian application related to a 1,200 not 2,000 h.p. engine, and as such an engine is available, the loan of it has in principle been approved, subject to the fulfilment of certain conditions as regards payment of freight, insurance and reconditioning charges. There is no 2,000 h.p. engine available nor a second engine of 1,200 h.p.

Hyde Park and an Aerodrome

MR. SANDERS asked the First Commissioner of Works whether he has under consideration the question of permitting a certain portion of Hyde Park to be used as an air port; and whether he is in a position to make a statement?

Mr. Lansbury: I have seen the reports in the newspapers, but the matter has not otherwise been brought to the notice of my Department. The only statement I can make is that personally I have no intention of giving countenance to any such project.

ALLEN, A.F.C., R.A.F., third son of Mr. Robert Allen, St. Ewolds, Jersey, and of the late Mrs. Allen, and BEATRICE H. UTTERSON, widow of Lieut.-Col. H. K. Uttersson, D.S.O., The Dorsetshire Regt., and elder daughter of Sir CLAUDE H. HILL, K.C.S.I., C.I.E., Lieut.-Governor of the Isle of Man, and of Lady Hill.

The engagement is announced between Sqdn.-Ldr. G. H. MARTINGELL, A.F.C., eldest son of the late H. R. Martingell, of Millmeade, Folkestone, and of Mrs. Martingell, Westgrove, Sandgate, and PHYLLIS BLETSOE, only daughter of Mr. and Mrs. HAROLD BROWN, Sywell House, Northampton-shire.

The marriage arranged between Flight-Lieut. CHRISTOPHER STILWELL and FREDA, elder daughter of Sir Frederic and Lady GAUNTLETT, will take place quietly on July 10, at St. Peter's Church, Yateley.

The marriage arranged between Squadron-Leader W. H. DE W. WALLER, R.A.F., son of the late Mr. and Mrs. Albert Waller, of Shannon Grove, Banagher, King's County, and ELIZABETH HOPE, daughter of the late Mr. H. E. LAMPE and of Mrs. Lampe, Grove House, Semley, Shaftesbury, will take place quietly on July 17, in London.

The marriage between Flight-Lieut. LESLEY TILLARD, R.A.F., elder son of Mr. and Mrs. R. P. Tillard, Little Hayes, Colehill, Wimborne and WINIFRED MARY, second daughter of the late Major W. J. BROOKE, and of Mrs. Brooke, Haughton Cottage, Shifnal, will take place at St. Andrew's Church, Shifnal, on Wednesday, July 2.

CORRESPONDENCE

The Editor does not hold himself responsible for opinions expressed by correspondents. The names and addresses of the writers, not necessarily for publication, must in all cases accompany letters intended for insertion in these columns.

"FLYING STICKS"

[2316] It is evident Mr. Camm has not seriously studied the science of aerodynamics, otherwise he would not make the rash statement that the fuselage of an aeroplane is a necessary evil, and does not add to the efficiency of the machine. Although I am not now actively engaged in model construction, I take a keen interest in its development, being a member of the progressive T.M.A.C. I claim to be a pioneer in the design and construction of models, having evolved designs which are standard practice today in full-sized machines, constructed in America and Germany, British constructors not having yet appreciated the possibilities of the designs. In 1903 I designed a model aeroplane which won the first prize presented by the President of the Aeronautical Society. The patent embodied the basic principle of the slotted wing, and was extensively cited against aeroplane inventors. It passed through three editions, proving a sound investment for the Patent Office at 1s. per copy, but a bad one for the inventor. In 1907 I designed and flew at the *Daily Mail* Competition the first corrugated all-metal aeroplane embodying the hemispherical entry enclosed streamline body, tractor propeller, non-lifting tail, hinged elevating flaps, no struts or wire bracing. The cambered corrugated wings gave absolute rigidity. This model flew faster and higher than the paper and string models which won the prizes, but crashed when it came to the ground owing to the high speed. Professor Junkers and Ford have copied this design in detail. The Air Ministry turned it down because they thought it was too rigid, and would always break. I was not surprised, because I have never been able to find out where the official mind gains its knowledge of research work. In view of the above I think I may be credited with some knowledge to speak on the subject of models. A scientifically designed enclosed streamlined body adds to the efficiency, lift and stability of an aeroplane by preventing the escape of air from the planes transversely. The stick type of body which Mr. Camm terms scientific, induces transverse adverse currents, reduces the lift of the 'planes, is not stable, and won't fly consistently on a given course. If Mr. Camm will go to Wimbledon Common to the T.M.A.C. competitions (which is a live club), he will see models in flight fitted with scientific fuselages which combine beauty of line, scientific design, and do not sacrifice performance. I have watched these wonderful models gliding with the wind for long distances after the power was expended at an angle of about 1 in 60. I am not in agreement with Mr. Camm that model clubs should be governed by an autocratic body. Should such a thing happen, it would degenerate into his description of the Aero Club: "A purely local club with an extremely parochial outlook," and judging from the tone of his letter, he would assume the rôle of the "Procurator Fiscal."

WILLIAM COCHRANE.

R.A.C., Pall Mall, S.W.1.
May 23, 1930.

SLOW-LANDING AIRCRAFT

[2317] In connection with Mr. Langrishe's letter in your issue of to-day, may I point out that machines with the landing speed he suggests are now being built in England? The original of them is in a museum, or other show place, in Berlin, having, as a school machine, survived 15,000 landings, of which the last was made this spring.

English designers are obsessed by the old box kite of Cody and his British and French contemporaries. Lilienthal's glider gave German designers the real bird model. The slow-landing 'plane is a glider with an engine attached, not an engine steered by a contraption of struts and stays.

A. J. RICHARDSON.

North Walsham.
June 6, 1930.

AIR MINISTRY NOTICE

AIR MINISTRY NOTICE TO AIRCRAFT OWNERS AND GROUND ENGINEERS

Examination of Applicants for Ground Engineers' Licences

1. EXAMINATION boards will sit for the purpose of examining applicants for ground engineers' licences at the following times and places:

- (a) London, on the first and third Wednesdays in every month.
- (b) Croydon, on the second and fourth Wednesdays in every month.
- (c) Manchester, on the first Wednesday in July and October.
- (d) Birmingham, on the first Wednesday in August and November.
- (e) Bristol, on the first Wednesday in September.

2. Applications for licences should be made on the appropriate form, which is obtainable on request, and should be addressed to The Secretary, Air Ministry (D.C.A.), Gwydyr House, Whitehall, London. Applications for extensions to existing licences will also be dealt with at these boards, and such applications should be sent either by letter or on the usual application form to the address given above.

3. Applications for examination at the centres named at 1 (c), (d) and (e), above, can only be accepted provided that the application is received 14 days before the dates specified and provided also that the total number of applications received are within the capacity of the board. Applicants whose applications are not accepted owing to these provisions will be given the opportunity for early examination at London or Croydon, or, alternatively, to be placed on a waiting list for the next board to be arranged in the particular place concerned.
(No. 18 of 1930.)

PUBLICATIONS RECEIVED

Bibliography of Aeronautics, 1928. National Advisory Committee for Aeronautics, Superintendent of Documents, Washington, D.C., U.S.A. Price 50 cents.

Air Ministry Athletic Association Sports Journal, No. 1. Vol. 1. May, 1930.

Handbook of Strength Calculations. Air Publication 970. H.M. Stationery Office, Kingsway, London, W.C.2. Price 3s. net.

Aeronautical Research Committee Reports and Memoranda: No. 1237 (Ae. 392).—The Flutter of Aeroplane Tails. By R. A. Frazer, B.A., B.Sc., and W. J. Duncan, B.Sc. January, 1930. Price 1s. 6d. net. No. 1292 (Ae. 441).—Stalled Flight Tests of a Moth Fitted with Auto Control Slots and Interceptors. By E. T. Jones, M.Eng., Flight-Lieut. C. E. Maitland, and Flight-Lieut. W. E. Purdin. Nov., 1929. Price 4d. net. H.M. Stationery Office, London, W.C.2.

U.S. Department of Commerce, Bureau of Standards Research Papers: No. 159.—Development of the Visual Type Airway Radiobeacon System. By J. H. Dellinger, H. Diamond and F. W. Dunmore. March, 1930. Price 20 cents. No. 160.—A Tuned-Reed Course Indicator for the 4 and 12-Course Aircraft Radio Range. By F. W. Dunmore. April, 1930. Price 15 cents. Superintendent of Documents, Washington, D.C.

AERONAUTICAL PATENT SPECIFICATIONS

(Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motors. The numbers in brackets are those under which the Specification will be printed and abridged, etc.)

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- Published June 12, 1930
- 4,536. W. W. PAGON. Airships. (305,937.)
 - 6,464. SUPERMARINE AVIATION WORKS, LTD., and R. J. MITCHELL. Cooling system of engines. (329,411.)
 - 13,548. V. J. BURNELL. Aeroplane construction. (329,489.)
 - 18,090. E. A. PERRIN. Flying machines. (314,336.)
 - 23,993. G. PEGNA and PIAGGIO and Co. Hydra-aeroplanes. (318,858.)

APPLIED FOR IN 1930

- Published June 12, 1930
- 5,969. V. J. BURNELL. Aeroplane fuselage construction. (329,615.)

FLIGHT, The Aircraft Engineer and Airships

36, GREAT QUEEN STREET, KINGSWAY, W.C.2

Telephone: Editorial, Holborn 1884;
Advertising, Holborn 3211.

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"Arrow," not "Avrôn"

By a misprint in the list of entries for the International Touring Competition, published on p. 604 of last week's issue of *FLIGHT*, the Spartan "Arrow" was called the "Avrôn." Will readers who desire to have their copies accurate please make the necessary correction.